RESEARCHES OF THE DEPARTMENT OF TERRESTRIAL MAGNETISM

VOLUME XIII

Ionospheric Research at Watheroo Observatory, Western Australia, June, 1938-June, 1946

L. V. BERKNER and H. W. WELLS

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VOLUME XIII

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(Retired June 30, 1946)

Ionospheric Research at Watheroo Observatory, Western Australia, June, 1938-June, 1946

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PREFACE

The history of research in terrestrial magnetism, especially that aspect of earth-magnetism arising in its atmosphere, is replete with examples of consequences of real benefit to mankind. In examining this great field of earth-science, man has not only vastly improved his comprehension of the workings of nature and adapted himself to them, thereby making their phenomena more useful to himself, but in doing so has created mechanical concepts and devices which in themselves represent substantial steps in his technological and material evolution. From the classic pulse-echo experiment of Breit and Tuve has grown a real appreciation of the ionized layers of the outer atmosphere from which is derived much of our modern knowledge of geomagnetism and of the Sun. On such foundations the vast international radio communication networks have been built, and from the mechanical concepts invented for the experiment has arisen radar with its essential role in our future material progress. The source of benefits acquired for mankind in pure research can no better be demonstrated than from the many applications which have accrued from this yet uncompleted search for the origin of Earth's magnetism.

It was natural that a laboratory dedicated to research into the phenomena of the Earth's magnetic field should turn to the physics of the outer atmosphere in its investigations. The great men in the development of this area of science--Gilbert, Gauss, Stewart, Schuster, and Chapman--had constructed a picture from which it became ever more apparent that the ephemeral variations of the Earth's magnetic field had their source in electrical phenomena of the atmosphere. At the same time were emerging the tools of exploration, the knowledge of radio-frequency electromagnetic waves growing from the concepts and experiments of Faraday, Henry, Maxwell, Hertz, and Marconi. Long range radio propagation had stimulated the imagination of Kennelly and Heaviside to envisage an electrified reflecting region of the atmosphere to support such radio transmissions.

It was with this background, and with the encouragement of Dr. John A. Fleming, director of the Department of Terrestrial Magnetism, that Breit and Tuve devised a direct means of "seeing" this ionized region of the outer atmosphere. And so the pulse-echo experiment was developed whereby a pulse of radio waves of a few hundred microseconds duration was transmitted upward and its echo was observed. From the time of travel of the pulse the frequency of the wave, and the characteristics of the echo--"the earmarks" left upon them by the ionosphere--could be deduced the height, density, distribution, and nature of the electrified layers which were explored by the pulse.

Experiments in geophysics are generally distinguished from those of laboratory physics by their geographic scale and by the limits on control which the experimenter can use to simplify his experiment, thus clarifying the interpretation of his observation. The geophysicist must examine nature as he finds it, and infrequently does he find an exact means of simulating a suitable counterpart for his experiment, on which other related and complicating phenomena of nature are not irrevocably superimposed.

Then the geophysicist must extend his experiments in space over the surface of the Earth, and continue them in time until the several superimposed natural phenomena can be separated exactly by the theory of probabilities. Only then can he establish the reality of some element of a complicated phenomena as it occurs in nature, comprehend the cause, and define the nature of the effect. This is an imposing task when the periodicity of important phenomena is the sunspot-cycle of 11 years.

Investigation of the ionized outer atmosphere--the ionosphere--is characteristically a geophysical problem in both space and time. From the pulse-echo experiment of Breit and Tuve, observatory techniques to provide for ionospheric measurements at remote locations for long intervals of time with great reliability were developed by Berkner and Wells. The records were arranged for fast and exact reduction of their data to numerical tabulations from which the individual phenomena could be isolated by the methods of probability. The tool in this technique which permits these detailed deductions is the magneto-ionic theory based on Lorentz "Theory of Electrons," and developed for the special case of the ionosphere by Appleton, Breit and Tuve, Booker, and others. The principal features of this theory have been adequately confirmed by many direct experiments.

The early apparatus provided for continuous recording of virtual height at a single frequency. But as quickly as technological problems could be conquered, multifrequency methods of recording were introduced which provided for complete and nearly simultaneous recording of the principal characteristics of the whole ionosphere as it was visible to radio waves sent from the ground. Multifrequency methods provided for a succession of records made over short intervals of time. During each time interval, pulses were successively transmitted at incremental changes of wave frequency over the whole significant range of radio frequencies, and the echoes were faithfully recorded. This method produced a succession of complete records of the ionosphere; from each record the important aspects of the ionosphere could be deduced, and from the succession of the records came the time variation of important features over hours, days, years, and the sunspot-cycles.

It is this powerful technique used with this interpretive tool which leads to the data contained in this volume. When the first observations over the whole significant range of radio frequencies were made at the Kensington Experimental Station of the Department of Terrestrial Magnetism beginning in 1935, methods of reduction of the data to effective tabulations were studied. To a substantial extent, the pattern established for reduction of data of magnetic observatories provided a basis, for the analyses to be done were not dissimilar. As special phenomena were observed, the abbreviations and symbols now so widely used to describe them were adopted. These methods of reduction and the symbols were adopted for world-wide

use in substantially their original form at the International Wave Propagation Conference at Washington in 1944.

The development of the pulse-echo experiment into this technique of recording and tabulation forms the foundation for the world-wide net of ionospheric observatories which are appearing over the surface of the globe. The first step in global studies of the ionosphere (beyond observation at the well-established laboratories at Washington and London) came with the installation of ionospheric equipment for continuous observation and recording at the observatories of the Department of Terrestrial Magnetism at Huancayo, Peru, and Watheroo, Western Australia. Since the volumes for the two observatories are being published separately, we have thought it best for the convenience of readers to provide in both volumes a full explanatory description of the methods and equipment.

Acknowledgment is made of the assistance and co-operation of officials of the Peruvian Government, especially those of the Post Office Department, facilitating the establishment of the ionospheric program at the Huancayo Observatory. The program at the Watheroo Observatory was carried out with the co-operation of the Chief Radio Inspector, Wireless Branch, Postmaster-General's Department, Melbourne; Radio Inspector, General Post Office, Perth; Sir John Madsen, Radio Research Board, Sydney; Commonwealth Department of Air, Melbourne; and the Australian Radio Propagation Committee, Sydney. During the war period, 1942-1946, the observational program was expanded under war contracts NXS-11605 and NXsr-33809.

L. V. Berkner and H. W. Wells,
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IONOSPHERIC RESEARCH AT WATHEROO OBSERVATORY, WESTERN AUSTRALIA
JUNE, 1938 - JUNE, 1946

INTRODUCTION

Continuous operation of multifrequency ionospheric recorders at Watheroo Magnetic Observatory, Western Australia, and Huancayo Magnetic Observatory, Peru, has resulted in a homogeneous series of data extending over a period of nearly ten years. Many analyses have been completed and published in technical journals by members of the staff of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington and by other investigators who have had access to the basic data. It is recognized, however, that the scientific value of the ionospheric data has by no means been fully exploited. Many of the hidden truths of geophysical or solar-terrestrial relationships will be uncovered only after longer series of data become available for analysis. It is with these facts in mind that the available ionospheric data from the observatories of the Department of Terrestrial Magnetism are presented. It is hoped that the availability to all investigators of the complete series of data will stimulate further study and produce results leading to a better understanding of the ionosphere and related phenomena.

DESCRIPTION OF OBSERVATORY AND IONOSPHERIC PROGRAM

Ionospheric research was initiated by the Department of Terrestrial Magnetism of the Carnegie Institution of Washington at the Watheroo Magnetic Observatory, Western Australia, in 1935. Since the programs of magnetic and related observations were already well-established, the Watheroo Magnetic Observatory was a particularly appropriate location because of the close relationship between ionospheric and magnetic research. Many of the same factors which led to the establishment of the magnetic observatory in Western Australia [1] have been of primary importance in the ionospheric program.

The Watheroo Magnetic Observatory is situated in latitude 30° 19'.1 south and longitude 115° 52'.6 east, at an elevation of 245 meters (805 feet) above sea level, 212 kilometers (132 miles) north of Perth, and about 19 kilometers (12 miles) west by road from Watheroo, a station on the Midland Railway. The distance to the nearest point on the railway is 17 kilometers; to westward from the observatory, 90 kilometers of sand plain extend to the Indian Ocean.

The terrain is a level stretch of sand plain, clear of timber. The total area of the observatory tract is about 240 acres. This tract was generously granted to the Carnegie Institution of Washington by the Government of Western Australia.

The observatory is of necessity a complete operating unit, providing, in addition to the research facilities, modern living quarters for the technical staff, gasoline and Diesel electric generators for power and lighting requirements, water and disposal systems, and maintenance workshops.

The program of ionospheric research at Watheroo Magnetic Observatory has progressed through three stages: (1) manual measurements with manual plotting of observations; (2) continuous recordings on a single (or fixed) frequency supplemented with manually adjusted multifrequency observations at regular intervals; (3) continuous automatic multifrequency recordings. Although the need for continuous automatic multifrequency apparatus had been apparent for some years, an installation did not become feasible until the completion of development of a suitable instrument at the Department of Terrestrial Magnetism in 1936. This development was complicated by the magnitude of engineering problems involved--both electrical and mechanical--and the limitations of electronic tubes available at the time. Three identical ionospheric recorders of suitable design were constructed and installed at Huancayo Magnetic Observatory, Peru, in 1937, at Watheroo Magnetic Observatory, Western Australia, in 1938, and at the University of Alaska, College, Alaska, in 1941. Figure 1 is a view of the ionospheric laboratory and antenna system at Watheroo.

The following sections are devoted to a discussion of techniques for ionospheric measurements, a detailed description of the design of the Department of Terrestrial Magnetism automatic recorder, a discussion of the interpretation and analyses of records, a survey of results, and the presentation in tabular form of ionospheric data collected since the installation of the automatic equipment. Although design of the apparatus is now obsolescent in view of recent developments in the electronic arts, it seems desirable to describe rather fully the construction and functioning of the equipment which has produced the long series of data here presented. The validity or accuracy of these data are in no manner impaired by improved techniques for ionospheric research, for the methods of calibration and control are at least equal to those employed in any modern equipment.

BASIC PRINCIPLES OF IONOSPHERIC RESEARCH

Structure of Ionosphere

The ionosphere is the gaseous envelope which surrounds the Earth above the stratosphere. It extends from approximately 40 kilometers to 1000 or more kilometers above the Earth. Figure 2 (courtesy of the Central Radio Propagation Laboratory) is a conception of the ionosphere with shading to indicate relative density of ionization. The figure also shows comparative heights of rockets, aurora, meteors, and balloons (1947). Free ions and electrons produced by the Sun's radiation within the ionosphere provide regions which reflect radio waves of certain wave frequencies back to Earth. This characteristic makes it possible to explore the ionosphere by means of radio waves and to gather basic knowledge of its structure and behavior.

Ion distribution in the sunlit hemisphere of the ionosphere is presented in Figure 3. It is seen that three

general regions of ionization exist under the direct rays of the Sun. These are the lower, or E-region (height approximately 100 kilometers); the intermediate or F1-region (height approximately 200 kilometers); and the highest, or F2-region (heights from approximately 250 kilometers upwards). Toward sunrise or sunset and at the higher latitudes, the F1- and F2-regions merge into a single F-region as the zenith angle of the Sun becomes large. Although the diagram is oversimplified, it illustrates the basic structure.

Figure 4 demonstrates paths of radio waves of different frequencies in exploration of the ionosphere. The density of shading represents electron density. The low-frequency waves penetrate only to low heights before encountering sufficient ionization to bend them back to Earth. Waves of somewhat higher frequencies penetrate to greater heights, and waves of still higher frequencies pass completely through the ionosphere.

A radio wave transmitted vertically upward is returned when it encounters a certain density of ionization determined by the wave frequency. The relation between frequency of the wave f, and the equivalent electron density N, required for its reflection at vertical incidence in absence of a magnetic field as derived from the magneto-ionic theory is given by

$$N = kf^2 \tag{1}$$

When f is given in mc/sec, k becomes 1.24×10^4 when the Lorentz correction is neglected. The maximum electron density for any ionospheric layer is established by the wave frequency which just penetrates through that layer. This is known as the "penetration" or "critical" frequency of a layer.

The existence of the Earth's magnetic field in the ionosphere results in a "Zeeman" effect and causes the single incident wave to be separated into two wave components having different critical frequencies. These are known as "ordinary" and "extraordinary" wave components. When the "layer structure" is sharply defined, the echoes from the components arrive superimposed, but they become resolved at or near the critical frequencies when one wave component is retarded more than the other. Thus the branch of the record which represents the "extraordinary" component is displaced toward higher frequencies by an amount depending on the intensity of the Earth's magnetic field. Therefore, the separation between ordinary and extraordinary wave critical frequencies gives a measure of the intensity of the Earth's magnetic field in the ionosphere.

Pulse Technique

The pulse technique of Breit and Tuve [2] has been used exclusively in all measurements. A series of short pulses of radio frequency energy are transmitted and the time required for the signals to travel from Earth to ionosphere and back is accurately measured. The velocity of propagation of radio waves is known to be equivalent to velocity of light waves (3×10^{10} cm/s). Hence the round-trip distance between Earth and ionosphere is

$$Vt = 3 \times 10^5 t \tag{2}$$

In terms of equivalent height (h) of a reflecting region when the measurements are made with receiver and transmitter located essentially side-by-side:

$$h = d/2 = 15 \times 10^4 t \tag{3}$$

or

$$t = h/15 \times 10^4 \tag{4}$$

where h and d are in kilometers, t in seconds. From (4) the time delay between signal and ionospheric echo is determined for an equivalent height. This is demonstrated in Table 1 for heights ranging from 50 to 1000 kilometers. The above relationship is obviously limited to vertical-incidence measurements and does not hold if receiver and transmitter are separated over a base line longer than a few kilometers. In practice, the accurate time-scale is calibrated to read directly in terms of equivalent height in kilometers.

Table 1. Time delay between signal and ionospheric echo

Equivalent height	Time delay	
km	seconds	milliseconds
50	3.33×10^{-4}	0.333
100	6.67×10^{-4}	0.667
200	1.333×10^{-3}	1.333
300	2.000×10^{-3}	2.000
400	2.667×10^{-3}	2.667
500	3.333×10^{-3}	3.333
600	4.000×10^{-3}	4.000
700	4.667×10^{-3}	4.667
800	5.333×10^{-3}	5.333
900	6.000×10^{-3}	6.000
1000	6.667×10^{-3}	6.667

Pulse Length

It is apparent from inspection of Table 1 that, in order to register echoes from a height of 50 kilometers, the receiver must fully recover from each pulse in less than 0.333 milliseconds. This condition determines the time required for pulse-length plus receiver recovery for any minimum effective recording height. (In the early designs of apparatus, it was much simpler to generate a pulse of relatively short duration--say, 50 to 100 microseconds--than it was to incorporate a rapid recovery rate into the receiver.) A pulse-length of 100 microseconds leaves 233 microseconds for receiver recovery when a 50 kilometer minimum height is assumed. Other factors affecting pulse-length, such as resolution required between reflections arriving at nearly the same time, are discussed in later sections of this volume.

Pulse-Repetition Frequency

The fastest practical rate of pulsing is determined by the maximum range of the recorder. Assuming a 1000 kilometer maximum range for which time delay (Table 1) is 6.667 milliseconds, it is found that a pulse-repetition frequency of 150 per second ($1/6.667 \times 10^{-3}$) is the maximum permissible. Any faster rate would result in an overlap on the recording screen between pulses and echoes from preceding pulses. Other limitations on pulse rate in multifrequency recorders will be discussed in a following section. For most ionospheric research, pulse rates are kept to a much lower value to reduce interference to other services in the radio-frequency spectrum. Pulse rates of 10 or 15 per second are used in the observations described herein.

AUTOMATIC MULTIFREQUENCY EQUIPMENT FOR IONOSPHERIC MEASUREMENTS

Basic Requirements

At normal incidence, radio waves of different frequencies penetrate to levels of different ion-density. To obtain the distribution of ion-density with respect to height, the frequency of the exploring radio transmission must be varied, continuously, through a wide range depending upon the limiting constants of the ionosphere. The ionization of the upper atmosphere undergoes rapid and irregular changes. Previous methods of ionospheric research did not provide the continuity and completeness of detail necessary to a most thorough understanding of these phenomena [3]. Such methods provided only for measurements or records on a single frequency, on a series of single frequencies by a cumbersome manual technique, or continuously over a restricted band of frequencies. The automatic, continuously recording, multifrequency equipment developed by the Department of Terrestrial Magnetism, Carnegie Institution of Washington, has overcome most of these difficulties. Complete data are obtained with only the nominal supervision of an operator.

Such an equipment involves transmission through much of the useful radio spectrum and possesses the following characteristics: (1) ability to record successfully without interference to or from existing radio services; (2) relatively uniform vertical radiation throughout the frequency range; (3) automatic interlocking of transmitter- and receiver-tuning; (4) mechanical simplicity; (5) uniform limits of precision and resolution. Each of these factors inherently involves certain features of the others; a successful equipment must depend upon a series of compromises. The design of the equipment requires an understanding of these factors and the utilization of methods and devices which permit the most satisfactory compromise.

General Description

The equipment consists of a radio transmitter and receiver located together, both utilizing the same antenna system and tuned circuits, and a suitable recorder. The method is fundamentally that of Breit and Tuve [2] wherein a radio-frequency pulse of short duration is transmitted and the time-retardation of the reflections is recorded. The transmission-frequency is changed continuously so that a complete sweep through a frequency range from 16.0 to 0.516 mc/sec is repeated every few minutes, providing a continual record of the constants of all regions of the ionosphere. A general view of the complete equipment is shown in Figure 5.

The basic arrangement of the components is shown in Figure 6, which is a block-diagram showing the connections of the various units. This arrangement permits transmitter and receiver to be locked precisely in tune at all frequencies. A single variable oscillator serves for both the transmitter and the receiver, as suggested by Gilliland [4].

In describing the operation, let f_I be the frequency to which the intermediate-frequency amplifier is tuned and let f_v be the variable frequency radiated and received at the antenna. Then to generate f_v, we select a frequency for the variable frequency oscillator (VO), its frequency f_{VO} such that

$$f_{VO} = f_v + f_I \quad \text{or} \quad f_{VO} = f_v - f_I \tag{5}$$

This oscillator excites the suppressor grids of the fully balanced, Class B modulator (M). The control grids of this modulator are excited by the intermediate-frequency oscillator (I), which has a fixed tuning, and operates at a frequency of f_I which is identical to the frequency to which the intermediate amplifier is tuned. The output of the fully balanced modulator contains only the two side-band frequencies which are

$$f_{VO} + f_I \quad \text{and} \quad f_{VO} - f_I \tag{6}$$

The frequencies f_{VO} and f_I are completely suppressed by the fully balanced modulator.

The frequencies in the output-circuit of the modulator will then be, from equations (5) and (6)

$$\begin{aligned} f_{M1} &= f_{VO} + f_I = f_v + f_I + f_I = f_v + 2f_I \\ f_{M2} &= f_{VO} - f_I = f_v + f_I - f_I = f_v \end{aligned} \tag{7}$$

These two side bands f_{M1} and f_{M2} are therefore separated by an amount $2f_I$. The intermediate frequency f_I is approximately 500 kc so that the separation of the two side bands is about 1000 kc. The side band f_{M1} is readily suppressed in the tuned-tank-circuit of the modulator which has a variable tuning and is adjusted to pass only frequency $f_{M2} = f_v$ to the power amplifier.

The first detector, which is also a fully balanced modulator, is arranged so that it will pass no energy when the power amplifier is excited, recovering in about 10^{-4} second after the excitation is stopped. These are tubes of the transmitter type with the requisite grid-insulation and construction to withstand transmitter voltages. The power-amplifier tank is tuned to frequency f_v and forms a tuned circuit for both the transmitter-output and the receiver-input.

The received signal is also of frequency identically f_v and is applied to the control grids of the first detector. The second grids of these tubes are excited from the variable-frequency oscillator (VO) which also excites the modulator. Therefore no matter what value is assigned to f_{VO} of the oscillator, and the corresponding wave frequency of radiation f_v, the output of the detector will contain the frequency

$$f_{VO} - f_v = f_v + f_I - f_v = f_I \tag{8}$$

This is the intermediate frequency which is amplified in the usual manner by the intermediate-frequency amplifier. Since all of the reflections which are recorded are received within 12 milliseconds after the transmitted pulse, the effect of detuning because of the changing frequency of oscillator (VO) during this interval is not serious. This factor does, however, limit the rate of sweep of frequency over the band, as is shown later.

To maintain the receiver and transmitter in tune, the only condition imposed is that the fixed-frequency oscillator f_I be tuned to the intermediate-frequency amplifier, a condition easy to fulfill.

The intermediate-frequency oscillator is "pulsed" through a keying amplifier by means of an electromagnetic device generating a sinusoidal pulse. This is generated by rotating a thin segment of "hypernik" through an unsaturated laminated "hypernik" core so that the flux in the core is changed for a short period as the segment is rotated through the core, in the manner of an ordinary electrical generator. A pulse is induced into a

coil wound around this core. The intermediate-frequency oscillator operates only during the instant that the pulse is transmitted; it is inoperative while the receiver is sensitized to receive the echoes.

A fast automatic volume-control is incorporated in the intermediate-frequency amplifier which has a time constant of about 10^{-4} second to prevent oscillations of excessive amplitude in the amplifier. In addition, a slow automatic volume-control, which integrates over 2×10^{-2} second, adjusts the sensitivity of the amplifier in accordance with the noise-level encountered, so that the records are not destroyed during periods of excessive noise. The equipment will record with a minimum input-signal of about 2×10^{-6} volt. A diode rectifier operates a fully balanced direct-current amplifier which in turn operates the oscillograph.

The general arrangement of the photographic recorder, shown in Figure 7, is similar to that described by Gilliland and Kenrick [5]. A permanent magnet, Dudell type oscillograph-element is used, although a cathode-ray tube could be used with equal facility. The galvanometer is normally operated with a bias such that the deflection is negative. The pulse merely reverses this bias so that the restoring force of the galvanometer assists in its initial acceleration, giving somewhat faster operation than with conventional operation, to provide for the short pulse-lengths used.

The camera is driven by a synchronous motor and has an adjustable speed through a reduction gear. Recording is done on photosensitized paper having a width of 12 cm so that scalings may be made without magnification of the trace. A vertical resolution of about 0.66 cm/100 km is ordinarily used. A speed giving about 60 cm of record per hour is found most useful. The optical system includes a spherical lens which is focused on the recording slit of the camera. This lens is placed so that the oscillograph must deflect to about two-thirds normal amplitude before the beam falls on the lens; the last one-third of the deflection is focused on the recording paper. A resistance-capacity filter is placed between the output of the intermediate-frequency amplifier and the recorder so that steady signals cannot deflect the element more than one-half normal amplitude. In this way much unwanted interference is avoided since it does not reach the spherical lens.

Successful recording is accomplished because reflection patterns are not random and form a coherent trace on the paper; noise and modulated interference, which pass the filter, are random and therefore incoherent on the record, merely causing some fogging. Recording is possible at all times even though the received low-level pulses may be entirely inaudible through noise such as that experienced during local thunderstorms.

Factors of Design

Before the automatic features are discussed, certain factors controlling the design must be considered. A pulse-duration of about 100 microseconds is used. This is necessarily a compromise; the maximum length is limited by the resolution required between reflections arriving at nearly the same time as is often the result of double refraction (vertical resolution); the minimum length is limited by the band-pass restrictions on the intermediate-frequency amplifier determined by the limitations of incoming interference, by the required fidelity of reproduction of reflection, by the necessity for restricting the frequency spread of transmitted side-band energy to prevent interference to other services, and by the requisite resolution of critical-frequency phenomena which become indistinct when the radiation embraces too wide a band of frequencies (horizontal resolution).

The minimum time of sweep through the band is controlled by the pulse-repetition frequency, the width of the band, the allowable frequency change between pulses, and the allowable detuning of the receiver from the transmitted frequency between pulses. To sweep the required frequency range in time T, the frequency must be changed by an amount, Δf, between pulses. If N pulses are transmitted per second, the time between the commencement of successive pulses is given by $\Delta t = 1/N$. Suppose the frequency, f, at any time during the sweep to be defined by a function

$$f = F(t) \tag{9}$$

then

$$f = \int_0^{\Delta t} dF(t) \tag{10}$$

The most general expression for F(t) must involve the determination of three constants depending upon the limits of the frequency range to be swept and the time rate of change of frequency. Two of the necessary equations are formed through substituting in equation (9) the value of f_{max}, the highest frequency, and f_{min}, the lowest frequency of the range. The assignment of values to Δf_{max} and Δt_{min} yields a third equation

$$(df/dt)_{max} = \Delta f_{max}/\Delta t_{min} \tag{11}$$

The minimum time required for a sweep therefore depends upon the values assigned to f_{max}, f_{min}, Δf_{max}, and Δt_{min} for any form of F(t).

The upper limit of the frequency range must be a frequency above which it is improbable that reflections will be returned at vertical incidence. At night, reflections can be observed on indefinitely low frequencies, although the reflections are observed usually from the 100-km level on a frequency of about 0.5 mc/sec. Because of the location of the international distress band on this latter frequency, the frequency band of 0.516 to 16.0 mc/sec was selected.

For a given band, equation (11) must be maximized for the most rapid sweep. The value of Δt is limited, however, by consideration of interference to existing services. Pulse-frequencies over 20 per second constitute a coherent sound, and, as a consequence N was limited to about ten pulses per second.

The maximum value of Δf_{max} is kept low to prevent progressive detuning of receiver, although this is not ordinarily a limiting factor. To define properly the complex pattern of a critical frequency at low frequencies, such as is often observed in a band of 50 kc, about 100 discrete pulses are required. This requires that Δf be about 0.5 kc/sec/pulse at low frequencies. This requirement is not so severe at the higher frequencies, because of the broader character of the critical frequencies. Here a value of about 3.0 kc/sec/pulse is acceptable.

The rate of frequency change must allow the production of a trace which is satisfactory for scaling. If the percentage accuracy of the scaling is to be constant, the frequency must be changed along a record moving at a uniform velocity by

$$q \log f = \ell \tag{12}$$

where q is a constant and ℓ is the distance along the recording paper. Let p be the percentage accuracy of the frequency which should correspond to an uncertainty of ℓ' as scaled on the record. Then

$$\log (1 + p)f - \log f = (1/q)\, \ell'$$

from which

$$q = \ell'/\log (1 + p) = \ell'/(1 + p), \text{where p is small} \tag{13}$$

then

$$\ell = [\ell'/(1 + p)] \log f_{max}/f_{min} \tag{14}$$

This expression gives the length of record such that the uncertainty of frequency corresponds to the uncertainty of scaling. If it is assumed that the frequency stability of a well-designed oscillator is 0.2 per cent when operated over long periods of time, and that the record can be measured to 0.1 mm, length of record of about 15 cm is necessary from the above expression to provide the necessary accuracy in scaling a single sweep of the frequency band. When the light beam is sufficiently narrow to delineate complex patterns, not less than 300 pulses/cm are necessary to expose the recording paper completely. The minimum time for the entire sweep for proper film exposure, horizontal resolution, and accuracy of scaling is therefore limited to about 7.5 minutes for N = 10. The maximum value of Δf must be consistent with this minimum time.

It is not practical to use the ideal law for frequency change given by equation (12). Not only must the absolute value of frequency be measured, but also the difference-frequencies, as is the case in measuring the separation of critical frequencies due to double refraction. Because of the tendency of an oscillator to drift off frequency in the same direction throughout the band due to some single cause, the relative separation of two adjacent frequencies is known to a much greater accuracy than is the precision of the absolute frequency. It is desirable that frequency separations be measured with approximately the same accuracy over the whole scale. For this purpose, a linear frequency scale would be most suitable. Such a scale would have the following disadvantages: (1) nonuniform absolute accuracy; (2) crowding of frequency scale below 2000 kc where reflections are observed at practically all times, with expansion of the high-frequency scale where reflections are observed only during exceptional conditions, leaving much unused film under ordinary circumstances; (3) too much time per sweep required if necessary accuracy of scaling is to be obtained at low frequencies; (4) increase in difficulty of the problem of design, as is made clear in subsequent discussion.

A square-law scale is a logical compromise between the two extremes. Such a scale leaves the higher frequency scale sufficiently open to observe unusual conditions with some accuracy, and at the same time yields the requisite accuracy at the lower frequencies where reflections are always observed. The frequency sweep is made to travel from high to low frequencies to eliminate certain mechanical difficulties in the equipment attendant on tuning of antenna and is expressed by

$$f = k[(T - t) + C]^2 \tag{15}$$

With the values of f_{max} = 16,000 kc/sec, f_{min} = 516 kc/sec, N = 10 pulses per second, and Δf_{max} = 3.0704 kc/sec, the constants evaluated from equation(10) and (11) are

$$\begin{aligned} kc^2 &= 516 \\ k(T + c)^2 &= 16{,}000 \\ 2k(T + c) &= 30.704 \end{aligned} \tag{16}$$

for which the solution is T = 855 seconds, k = 0.014731 kc/sec, and c = 187.18 seconds.

The entire frequency range from 516 to 16,000 kc is divided into six bands, each requiring 142.5 seconds to traverse, with 7.5 seconds between bands for switching. Thus one sweep requires just 15 minutes for completion. During the switching period, no pulses are emitted. These bands, as determined from equation (15) are given in Table 2.

Figure 8 shows the value of frequency at any time during the frequency sweep. Figure 9 shows the rate of change of frequency with respect to frequency or time, and the change in frequency in kilocycles per pulse at any frequency in the range. Selection of these bands is based upon the engineering requirements of condenser-tuned circuits. Ordinarily, the frequency range of such a circuit is limited to about three to one. If the output is to be maintained reasonably uniform, the squared-frequency scale lends itself to the most economical selection of bands.

Table 2. Frequency bands

Band	Frequency range in kilocycles
1	16000 - 11924
2	11924 - 8446
3	8446 - 5566
4	5566 - 3284
5	3284 - 1610
6	1610 - 516

Mechanical Control

Figure 10 shows that only four variable tuning controls are required for both the transmitter and receiver. These are variable capacitors in each case. Associated with each variable tuning control is a selector switch which introduces the proper values of L and C into the circuit for each band.

A selector panel, shown in Figure 11, is located at the bottom of a relay rack and provides the entire mechanical control for the equipment. The units which have the variable tuning are mounted above the selector. The main camshaft of the selector panel is driven continuously at 0.4 revolution per minute by a 1/75 horsepower synchronous motor through a reduction gear; this shaft rotates 24 cams in four groups of six, each group corresponding to one variable tuning control. Twenty-four short cam followers, one following each cam, have vertical motions which are determined by the shapes of the cams. Above each group of six cam followers is a rotary cam selector having an arm as shown in Figure 12. This

arm is capable of both rotary and vertical motion. It has six positions, 60° apart; each position corresponds to the selection of one of the six cam followers in its group. The vertical motion of a selected cam follower causes the cam-follower selector to rise with a motion determined by the shape of the cam. This rotates the variable capacitor, providing the proper tuning. At the end of the frequency band, the cam followers drop and the four cam-follower selectors rotate, selecting a new set of four cam followers. In this way a new set of cams is selected for each band.

The cam-follower selector is motor driven and operated through a switching device of special design. Any band sequence can be set up through merely operating any combination of a series of six switches. Slight changes in positions of the selector arm, due to change in frictional force, are not cumulative. The selector-arm drive shaft also operates the selector switches in the four tuning units by means of a direct chain drive to each unit. The entire assembly of an experimental multifrequency equipment is shown in Figure 5. The units are arranged as shown in Figure 6, with the receiving equipment and power units on the right.

The design of a radio-frequency band switch is shown in Figure 13. The switch has six positions corresponding to the six bands and the switch cams can be readily cut into any desirable shape to provide for practically any combination of contacts in each position. In addition, each switch is equipped with back-contacts so that unused inductors are grounded. The design of these switches is an important feature in successful operation of the equipment. The variable capacitors are sectionalized so that the total capacitance available is changed for different bands, providing for rotation through the full 180° in each band, which is necessary if requisite frequency calibration is to be maintained.

Antenna Arrangement

The details of the antenna-tuning network are shown in Figures 10 and 14. Capacitor sections may be put either in series or in parallel so that the total condenser reactance corresponds to the required values in any part of the frequency range. It can be seen that resonance of the output tank can be obtained for an infinite number of settings of the tank condensers. Therefore, the ratio of these capacitances can be adjusted by the cam motion so that the impedance at the sending end of the transmission line is matched to the output tank both as to scalar magnitude and phase angle at all frequencies.

Two antennas are used to maintain high-angle radiation throughout the range. Antenna 1 is used for bands one to four (16,000 to 3,284 kc), inclusive, and is 30 meters in length. Antenna 2 is used in bands five and six (3,284 to 516 kc) and is 125 meters in length. Both antennas are in the form of horizontal doublets with 550-ohm transmission lines connected to the centers. Matching between the transmission lines and the antennas is evidently impracticable, in so far as scalar values of the impedance are concerned, while the reactance is taken up in the antenna-tuning network at the transmitter. To reduce the antiresonant impedance of the antenna, each arm of the doublet is of the form of a cage of diameter about two meters. The antiresonant resistance of such a doublet at the center is given very closely by the expression

$$R = Z_0^2/R_L \qquad (17)$$

where R_L is the radiation resistance and Z_0 is the surge impedance of the doublet. If, for example, a No. 10 Brown and Sharpe gage doublet antenna is compared to the 2-meter cage doublet antenna, the antiresonant impedance of the cage is about 3000 ohms as compared to about 30,000 ohms for the No. 10 wire, with some variation depending upon the other dimensions of the antennas. The mismatch between the transmission line and the antenna is not serious in this case, never exceeding about 5:1 either way. Similarly, it is practicable to match the antiresonant resistance of 3000 ohms into the power-amplifier tank efficiently. Likewise the reactance is correspondingly reduced so that the tuning-matching arrangement is feasible.

Calibration

The basic calibration of the records, for both wave frequency along the abscissa and height along the ordinate, depends on the accurate measurement of time. This is achieved through control of the frequency of the electrical power. Where commercial power is used, it is required that its frequency be maintained within certain small limits. At field stations where no adequate source of commercial power is available, direct current is generated and converted to alternating current by a motor alternator. The frequency of this alternating current is controlled by a temperature-compensated 60-cycle tuning fork.

To obtain proper frequency calibration along the abscissa of the record, the maximum cam rise is 100 mm which, when coupled to a disc having a periphery of 200 mm, provides for capacitor rotation of 180°. It is possible to grind the cams to 0.1 mm, thus providing a mechanical calibration accuracy of one part in 1000. The oscillator is designed to operate within these limits. Frequencies are repeated for given cam positions on successive runs to well within one part in 10,000. The calibration on the automatic tuning unit provides for cam settings of one part in 1000. To obtain the proper shape of cam, the calibrated readings of the dials on the four tuning units are obtained directly from a dial reading 0 to 1000. This calibration corresponds exactly to the rise of cam in tenths of millimeters.

Noninterference of Emission

It is essential that for successful operation there must exist no interference whatsoever to radio service. That this is the case is apparent from a review of the following details of design:

(1) The emission is a short pulse of 1/10,000-second duration. One such pulse is emitted each one-tenth second. On an average, the frequency sweeps at the rate of about 900 kc or more per minute so that the frequency advances on an average of 1.5 kc between each pulse. On an average about five pulses occur in any channel.

(2) One complete sweep of frequency is made in 15 minutes. Therefore, the pulses are repeated in any channel only at intervals of about 15 minutes.

(3) The antenna is a high-angle radiator with little low-angle radiation. Therefore, to even a nearby receiver located just outside the induction field of the antenna, the

ground wave is inappreciable. Such a receiver is thus at an equivalent distance of not less than 200 km from the equipment (the lowest layer is about 100-km height).

(4) The average radiated power of the equipment is 0.64 watt, and the peak power of any pulse is about 800 watts. Therefore, the power involved is much less than that of most existing services. Only sufficient power is used to permit discrimination between echoes and atmospheric noise. The level of the received pulse is often down into the atmospheric noise-level so that discrmination depends on photographic repetition of pulses superimposed on random noise.

(5) The pulse is of very short duration and as nearly sinusoidal in form as possible so that the side-band energy occupies a restricted band. The side-band frequency of the pulse is greatly attenuated by all receivers except those especially designed to receive it because of their narrow band widths.

(6) The pulse-frequency (ten pulses per second) is so low that it does not constitute a coherent "sound" as defined in audio-frequency parlance. This pulse rate has been made the minimum consistent with the rate of frequency-change, any lower rate materially affecting the completeness of the record.

(7) The emission can be received continuously only on a special receiver whose frequency is changed with the frequency of the transmitter. The pulses and their side bands will be actually emitted in any channel for a total time of only 0.0003 to 0.0005 second during the period of less than one-half second that the equipment-frequency is passing through the channel. This will be repeated once each 15 minutes. Thus the emission, to a receiver adjusted to the threshold of maximum sensitivity, will sound about like a watch ticking in any channel for less than one second in each 15 minutes.

After exhaustive tests and inspections by the engineering staffs of the United States Federal Communications Commission to determine whether interference to existing radio services would result, it was found that interference does not occur. License was granted for development and operation at the Department of Terrestrial Magnetism experimental station near Kensington, Maryland, within a few miles of governmental, commercial, and broadcast activities. The Kensington Experimental Station was abandoned in 1945 because of real estate development in the area, and a new experimental station near Derwood, Maryland, was completed in 1947, providing greatly increased facilities for all types of upper atmospheric research.

IONOSPHERIC RECORDS AND ANALYSES

Examples of Records

Typical examples of ionospheric records obtained with the apparatus described in the preceding section are given in Figures 15 and 16. In each case, the upper portion of record is reserved for continuous recordings on a fixed frequency, 4.8 mc/sec, while the multifrequency record occupies the lower portion. Time-scale progresses from right to left and frequency-scale changes from 16.0 to 0.516 mc/sec in the same direction. The scale of virtual height extends from 0 km at the bottom (the base line) up to 1200 km near the top of the record just below the base line for the fixed-frequency portion. Figure 15 was obtained in late afternoon hours under conditions when E-layer was well defined at frequencies below 2.2 mc while the F-layer was recorded at frequencies between 2.2 and 10.7 mc. The absence of an F1-layer is characteristic of evening and night observations. Two clearly defined multiple echoes are apparent at virtual heights two and three times that of the first trace. These represent signals that have completed the round trip between Earth and ionosphere two and three times, respectively.

The principal difference between Figures 15 and 16 is shown by the presence of an F1-layer in the latter record. This may be observed between 3.3 and 5.0 mc. Reference to the fixed-frequency portion shows that echoes are being recorded from both E- and F1-layers. This observation may be confirmed by comparison of the multifrequency records at 4.8 mc since the fixed-frequency records give a continuous cross-section of the ionosphere at that frequency. The difference between day and night conditions in the ionosphere is clearly shown in Figure 17.

The grey background of the records is produced by random noise or signals which cause the oscillograph light beam to deflect into recording position but do not leave a coherent trace. The occasional vertical dark lines are the result of interference from stations whose radio frequency carriers are modulating continuously at high level, such as broadcast stations.

Methods of Analyses

International Procedure for Analyses.--The procedure for analyses of ionospheric records was established on an international basis at the International Radio Propagation Conference at Washington, D. C., April, 1944. This procedure is substantially the same as that originally devised at the Department of Terrestrial Magnetism several years earlier when the techniques and procedures of ionosphere work were developed. The international procedure was officially adopted at the Watheroo ionosphere station August 1, 1944, and at the Huancayo station July 1, 1944, except in the case of one item, and entailed almost no revision of existing observatory procedures. The only significant changes in procedure affecting the presentation of data were the use of "median" rather than "mean" monthly values, and the use of brackets rather than parentheses to enclose interpolated hourly values. The use of brackets was begun at both observatories on the dates just given, but the taking of median monthly values was deferred at Huancayo until February 1, 1945, and at Watheroo until May, 1946. In the publication of the Watheroo data for May and June, 1946, median monthly values are replaced by mean monthly values, in order that all data for the years 1938 to 1946 might have similar treatment.

Adopted Procedure for Analyses.--(A) When observations are missing because of loss of trace due to failure of equipment for a total period of two hours or less, interpolation is made and indicated on the tabulation sheet by the interpolated value in brackets; when observations are missing for more than two hours, no interpolation is made.

(B) The following data are tabulated from the ionospheric records:

(1) f^oF2.--Critical frequency of ordinary wave component F2-region.

(2) h'F2.--Minimum virtual height of F2-layer.

(3) f^oF1.--Critical frequency F1-region. This is not reported unless there is a definite and abrupt change in the h'f curve either for the first reflections or for one of the multiples.

(4) h'F1.--Minimum virtual height of F1-region. This is recorded whenever f^oF1 is identified.

(5) f^oE.--Critical frequency of normal E-layer. This is reported only when there is group retardation seen at the E-region echo; when stratification or other ionization effects are observed between the E- and F1-layers, as often occurs, the appropriate symbol H, adopted by the International Radio Propagation Conference is to be used to identify the condition.

(6) f(min).--Lowest frequency at which reflections are recorded.

(7) Median values.--The monthly summary sheets of the preceding ionospheric characteristics are to report median rather than mean values for the monthly hour-by-hour or vertical summaries. Horizontal row summaries for the days of the month are not required. The median value of a characteristic is one that is exceeded 50 per cent of the time. One way of arriving at this median value is to arrange all values in order of magnitude and select the middle value of the series whenever the series contains an odd number of values; when the series contains an even number of values, it is conventional to take one-half the sum of the two values at the middle of the series.

Symbols.--The following symbols are used in preparing detailed tabulations of hourly values of ionospheric characteristics for all days:

( ) - Doubtful value because of scattering, instrumental deficiency, etc. This symbol can also be used when the characteristic cannot be definitely determined or interpreted because of limitations of instrument or method of observing.

[ ] - Interpolated value. The method of interpolation used should take cognizance of the normal trend of the characteristic considered. Linear interpolation is not adequate during intervals when the rate of change is high.

A or a - Characteristic not measurable because of blanketing by sporadic or abnormal E.

B or b - Characteristic not measurable because of loss of trace due to absorption, either partial or complete.

C or c - Characteristic not measurable because of loss of trace due to failure of equipment.

D or d - Critical frequency higher than upper frequency-limit of recorder.

E or e - Critical frequency less than lower frequency-limit of recorder.

F or f - Spread-echoes present. If spread-echoes obscure the characteristic, no numerical value is to be given.

G or g - f^oF2 equal to or less than f^oF1. This symbol also should be used with the characteristics describing the condition when the ion ization of the F2-layer is only slightly above that of the F1-layer and there is only a very small separation in frequency between the two traces and an abnormally great virtual height for the F2-layer is recorded.

H or h - Stratification observed within the region.

J or j - Ordinary-wave critical frequency deduced from measured extraordinary-wave critical frequency.

K or k - Ionospheric storm in progress. Optional for stations desiring to indicate certain hourly values in this manner.

M or m- F1-layer not measurable with accuracy because of proxmity of F2-layer.

Tabulations.--When ionospheric data are scaled in accordance with the procedures outlined above, each observation is recorded on a tabulation sheet of the type shown in the section of tabulated data. Provision is made for 24 hourly values for each day of the month. The entry represents a measurement made approximately at the hour indicated. Symbols, whenever required to complete the description of an observation, are inserted in the same block with the scaled value. Tabulation sheets are essentially complete (a value for each hour) for ionospheric phenomena which are continuous, such as F-layer measurements. Tabulation sheets for other phenomena which are discontinuous, such as the daytime F1-layer, are complete only for that portion of each day when the characteristics are measurable. The absence of a measurement for any hour or period is explained by the appropriate symbol, the most frequent causes being equipment failure (symbol c), sporadic E ionization (symbol a), and high absorption (symbol b).

Values tabulated for any hour are not obtained exactly on the hour because the time of sweep of the recorder commences on the hour and terminates 15 minutes later. The exact time of any frequency value may be determined from further reference to Figure 8 which shows frequency versus time for one sweep. By application of this relationship, a correction may be applied for exact time of observation whenever analysis requires this precision.

SURVEY OF RESULTS

Probably the outstanding advantage of the ionospheric data from the Watheroo and Huancayo Magnetic Observatories, for purposes of analysis and research, is its long series of continuous, homogeneous observations. This feature alone has made it invaluable to many investigators throughout the world. Although a detailed discussion of ionospheric results and progress is beyond the scope of this publication, it is of interest to review some of the more significant contributions to knowledge of the Earth's upper atmosphere which have been realized either directly or indirectly from the ionospheric recording program of the Department of Terrestrial Magnetism. For more detailed information and specific author references, the reader is referred to the bibliography presented at the end of this volume.

Ionization in the several ionospheric regions is produced by solar ultraviolet radiation as the primary agent. Diurnal, seasonal, and 11-year cycles of intensity of

ionization are observed which closely relate ionospheric characteristics to the over-all intensity of solar ultraviolet radiation. The intensity of solar ultraviolet is directly proportional to sunspot numbers, and ion density in the E- and F1-regions increases approximately 40 per cent from sunspot minimum to maximum. In the F2-region, this over-all increase approaches 400 per cent. The change in F2-region ionization with change in sunspot number is shown in Figure 18.

Although the E- and F1-regions have simple seasonal variations with maximum ionization in local summer and minimum ionization in local winter, the F2-region is somewhat anomalous in nature. Minimum electron densities are observed in summer with maximum values in winter. If one recalls that the radio technique measures maximum density of ionization per cubic centimeter, some of this anomalous performance may be reconciled by the assumption that heating and resultant expansion play an important part in determining F2-region characteristics. In local summer the total ionization in a vertical column may be greater than in winter, but the ion density is less due to heating and expansion of the upper atmosphere. Seasonal changes are illustrated in Figure 19.

There is now substantial evidence that contours of F2-region ionization are distributed in close similarity to the contours of geomagnetic latitudes. Belts of maximum density exist about 20 degrees north and south of the geomagnetic equator. Intensities decrease rather rapidly toward the geomagnetic equator and decrease more gradually toward the higher latitudes.

The long series of ionospheric data from the Watheroo and Huancayo Magnetic Observatories were instrumental in revealing the recurrent nature of average monthly characteristics at yearly intervals. For example, the graph of f^oF2 at Huancayo for March, 1941, is remarkably similar to that for March, 1942, with the exception of a uniform offset dependent on the sunspot activity and over-all trend. When used in connection with the sunspot-cycle relationship, this characteristic establishes a basis for the forecasting of average ionospheric conditions up to a year or more in advance.

Similarly, the unique locations of the observatories resulted in data from isolated parts of the world which made possible the first approach to an understanding of world-wide characteristics of the ionosphere. Although E- and F1-regions were found to have uniform and predictable properties, the knowledge of anomalous and unpredictable properties of the F2-region in different parts of the world served as a stimulus for expanded programs of ionospheric measurements. The location of the Watheroo and Huancayo Magnetic Observatories in the present world-wide network of stations is shown in Figure 20.

Experimental confirmation of the magneto-ionic theory constitutes one of the major advances of ionospheric research. This theory provides the tool for exact measurement of equivalent electron densities at various levels. Let us consider some of the confirming evidence. For instance, theory predicts that a radio wave, propagated in the ionosphere in the presence of the Earth's magnetic field, will be split into two wave components. The behavior of these wave components will be more complex than that of the simple wave transmitted, and they will be propagated differently; one wave component will be reflected at a lower electron density than the other. Observation shows that two such components are returned, as has been discussed in preceding sections. Theory says that the wave frequency at which each component will penetrate a layer of ionization will differ by an amount which is a function of the intensity of the geomagnetic field. Observation shows this separation of the critical frequencies to be just the amount predicted. At Washington, the difference is about twice that at Huancayo where the geomagnetic field-strength is only half as great.

Also, theory states that at the magnetic equator, where the field is horizontal, the two reflected wave components will vibrate in mutually perpendicular planes, one along the field, the other perpendicular to it. Special tests were conducted at the Huancayo Magnetic Observatory (on the magnetic equator) which directly confirm this part of the theory. An antenna placed in the magnetic north-south plane receives only the ordinary wave component; in the east-west plane only the extraordinary component is received, while at any intermediate angle both components are observed simultaneously. The original experiments were conducted with manually operated equipment and were subsequently repeated with the same degree of success using automatic multifrequency apparatus. Records obtained during the polarization experiments are given in Figure 21. In these and other experiments, the reasoning of electromagnetic theory has been tested step by step until little doubt remains of its essential validity.

What evidence relating to geomagnetic diurnal variation can be obtained from the ionosphere? Only in regions where sufficient conductivity exists can there flow electrical currents to produce the geomagnetic change. Density of ionization alone is not sufficient. The contribution of each ion to the electrical conductivity must be considered. This depends on temperature and pressure of the atmosphere, on the masses associated with the changes, and on the strength of the geomagnetic field. All these taken together indicate that most suitable conditions for maximum current flow probably exist at a level around 70 or 80 kilometers above the Earth's surface. With improved experimental techniques plus the use of rockets for exploration of the outer atmosphere, it may be anticipated that the near future will provide more definite information on this point.

Ionospheric effects associated with geomagnetic storms appear predominantly in the F-region. During magnetic disturbance, the ionospheric effects are so varied as to defy complete description. The onset of a magnetic storm is often preceded by higher than normal F-region ionization. Storm commencements are practically simultaneous in occurrence over the Earth. Great turbulence and subnormal ionization prevail. Often the ion density of the daytime F2-layer becomes less than that of the F1-layer, resulting in a temporary disappearance. Subnormal values of ionization often persist for a day or more after severe disturbances. Ionospheric disturbances during a magnetic storm are illustrated in Figure 22.

The application of a new ionospheric recording technique has led to the discovery of rapidly moving clouds and other sudden changes in structure of the ionosphere during magnetic storms. A "panoramic" recorder makes complete records several times a minute on motion picture film. Subsequent projection of the record as a motion picture provides a condensation of time-scale and a continuity of events which establish a basis for understanding of many fundamental processes of the ionosphere. It is now apparent that corpuscular radiation

contributes materially to F-region ionization under favorable conditions. The principal effects of influx of the rapidly moving clouds are sudden changes in F-region ionization, rapid changes indicating turbulence which is often progressive from high to low heights, rapid fluctuations of echoes at the lower frequencies with occasional temporary disappearance indicating high absorption. Rapid changes in conditions in the ionosphere during a magnetic storm are shown in Figure 23.

The radio fade-out is the one outstanding example of a direct relationship between Sun and Earth. The simultaneous occurrence of a solar flare or chromospheric eruption and of the disappearance of radio signals from the ionosphere was established by Dellinger's analyses. The first simultaneous observation of a fade-out, solar flare, and the characteristic geomagnetic pulse was obtained at Huancayo on April 8, 1936, when a manually operated ionospheric recorder was still in use. It has been shown that the unique geomagnetic pulse associated with the fade-out is an augmentation of the normal diurnal variation at all places where it is observed. The magnetic pulse and ionospheric fade-out at the time of a solar eruption are shown in Figure 24.

Further study of this interesting effect reveals that fade-outs occur in varying degrees of intensity depending upon the nature of the solar flare. The duration of a fade-out may be as short as a few minutes or as long as several hours. In Figure 25, a fade-out of about 30 minutes' duration is shown. It is generally agreed that the phenomenon may be explained as follows: (1) The solar flare emits ultraviolet radiation of great intensity. (2) The solar radiation produces a temporary but intense ionization in the ionosphere below the normal E-layer. (3) The presence of intense ionization results in the absorption of radio signals, and the increased conductivity permits a greater circulation of current which augments the Earth's magnetic field. The presence of ionization in the lower ionosphere causes high absorption since electrons set in motion by the electric field of the radio wave strike gas particles before their energy can be reradiated. Ionization at even slightly higher levels is effective in supporting propagation of radio waves with little absorption since electrons are free to move without a large number of collisions and can therefore reradiate energy.

Ionospheric measurements during solar eclipses have established beyond doubt the fundamental nature of the several ionized regions. The E- and F1-regions are especially sensitive indicators because of the high recombination coefficients which obtain at the lower heights. Successful observations have been conducted by a number of investigators during partial to complete solar eclipses. In several expeditions, the occurrence of clouds made it impossible to conduct observations except those incorporating the radio technique. The results of eclipse measurements may be summarized as follows:

E-region.--A decrease of ionization is observed with the beginning of the eclipse. Minimum ionization is observed at the time of maximum eclipse and the normal values are again established at the end of eclipse.

F1-region.--Variations in ionization are in phase with the development of eclipse as remarked above for the E-region.

F2-region.--There is a much smaller but definite reduction in ionization associated with the eclipse. In some cases the ionization is subnormal somewhat before the beginning of visual eclipse and remains low for a short period after the eclipse.

In making eclipse observations of the ionosphere, it is customary to run a series of control observations for a period of at least a week before and after. The eclipse measurements are then compared with average or median values for control days to determine the extent of deviations from normal, as in Figures 26 and 27. This procedure is adequate for the E- and F1-regions, but has been more difficult to apply to the F2-region which is subject to much larger day-to-day fluctuations. Some of this uncertainty is ruled out by the fact that eclipse observations made at a number of different locations invariably show reduced F2-region ionization during the eclipse period.

It may be anticipated that the application of the panoramic or fast-sweep recording technique will reveal new facts regarding the fundamental processes which occur in the ionosphere during an eclipse.

Sporadic E-region ionization continues to be a subject of unusual interest. It produces a blanketing type of echo from the ionosphere which is often sufficiently dense to mask out the higher regions. It normally occurs at heights which are slightly above the normal E-layer, and it may last from a few minutes to a few hours. In general, it is much more prevalent in the higher latitudes than in equatorial regions. At Huancayo, on the geomagnetic equator, this effect is rarely observed. At other locations approaching the northern or southern auroral zones, Es occurs much more frequently. In Figure 28 the development of Es is recorded.

The diurnal distribution of Es at the auroral zone shows much greater occurrence at night than in the daytime. However, stations at somewhat lower latitudes show more sporadic E in the daytime than at night. This apparent anomaly may be reconciled, however, if one assumes that the ionizing agency is more penetrating in the daytime along the auroral zone, resulting in the high absorption which is characteristic of daytime observations in the polar regions. The same radiations at somewhat lower latitudes may be somewhat less penetrating and produce sporadic-E ionization.

A pronounced characteristic of sporadic E is its maximum occurrence during local summer with minimum in winter. The seasonal features of sporadic E already well established for the Northern Hemisphere have been confirmed for the Southern Hemisphere as a result of analyses of Watheroo data. Average diurnal curves at Watheroo also show most frequent occurrence at night with maximum at midnight, local time, although there is a tendency for the most intense sporadic E to occur during day hours. Annual trends show increasing values from 1938 to 1941 with decreasing values from 1941 through 1944, as in Figure 29. Detailed knowledge of characteristics of sporadic E are of especial interest since radio-wave propagation on frequencies up to 80 mc/sec or more may be appreciably affected by this phenomena. No pronounced recurrence tendency of sporadic E with the 27-day solar rotational period has been identified. Furthermore, comparisons of sporadic E and magnetic activity do not reveal any tendency of sporadic E to be more prevalent during periods of magnetic disturbance.

Another interesting fact regarding Es is established by simultaneous ionospheric and auroral observations at College, Alaska [6]. The aurora directly overhead was photographed by means of an automatic camera and the

results were compared with ionospheric records. The analysis revealed a remarkable coincidence of Es with aurora overhead. When aurora was observed at or near the zenith, Es was recorded on the ionospheric equipment. However, the converse of this relationship does not hold, that is, the presence of Es does not indicate that visible aurora is seen overhead.

The preceding survey of results is submitted in order to review some of the scientific knowledge of the upper atmosphere and ionosphere which has been acquired by the application of radio frequency techniques. However, in spite of the advances which have been made, there remain many important and fundamental unsolved problems in the fields of ionospheric and upper-atmospheric research. Little is known about the lower ionosphere (below approximately 80 kilometers). The current sheet which regulates magnetic diurnal variation is presumed to flow in the lower ionosphere, but this has never been confirmed experimentally. Much basic information is lacking on the fundamental processes of ion production and layer formation in the ionosphere. What wave lengths of ultraviolet radiation can penetrate from the Sun through the atmosphere to heights of 80 or even 100 kilometers and produce ionization? Why doesn't all E-layer ionization disappear at night? Why are the normal ionospheric regions apparently unaffected by the solar flare which causes the radio fade-out? What produces and supports sporadic E-region ionization? Why is there an ionosphere at all over polar regions in winter? What are the mechanisms which relate ionospheric and magnetic storms? Why is the F2-region greatly disturbed during magnetic storms while E- and F1-regions are relatively undisturbed? What is the intensity of the Earth's magnetic field at different levels in the ionosphere during quiet and disturbed conditions? Does a ring-current exist during magnetic storms at a distance of several Earth diameters? If so, can it be detected and measured by techniques now available? What further discoveries will be uncovered by application of the new panoramic technique to the study of short-period fluctuations under many different ionospheric conditions?

These represent but a few of the problems which face the experimental and theoretical geophysicists investigating the upper atmosphere. It is reasonable to expect that--as a result of vigorous and expanded interest in this field of research throughout the world--one may look forward with confidence to fruitful discoveries and the applications of scientific knowledge to the improvement of mankind.

LITERATURE CITED

1. Fleming, J. A., H. F. Johnston, A. G. McNish, S. E. Forbush, and W. E. Scott. 1947. Magnetic results from Watheroo Observatory, Western Australia, 1919-1935. Carnegie Inst. Wash. Pub. No. 175, vol. VII-A.
2. Breit, G., and M. A. Tuve. 1926. A test of the existence of the conducting layer. Phys. Rev., vol. 28, pp. 554-575.
3. Berkner, L. V. 1934. Multifrequency measurement of virtual heights of the ionized regions of the ionosphere. C. R. Assemblée de Lisbonne, September, 1933. Union Géod. Géophys. Internat. Ass. Mag. Electr. Terr., Bull. No. 9, pp. 201-206.
4. Gilliland, T. R. 1934. Ionospheric investigations. Nature, vol. 134, p. 379.
5. Gilliland, T. R., and G. W. Kenrick. 1932. Preliminary note on an automatic recorder giving a continuous height record of the Kennelly-Heaviside layer. Proc. Inst. Radio Eng., vol. 20, pp. 540-547.
6. Seaton, S. L., H. W. Wells, L. V. Berkner, and C. W. Malich. 1947. I. Ionospheric research at College, Alaska, July, 1941-June, 1946. II. Auroral research at College, Alaska, 1941-1944. Carnegie Inst. Wash. Pub. No. 175, vol. 12.

FIGURES 1-29

LIST OF FIGURES

Fig. 1. Ionospherics laboratory and antenna system, Watheroo Magnetic Observatory

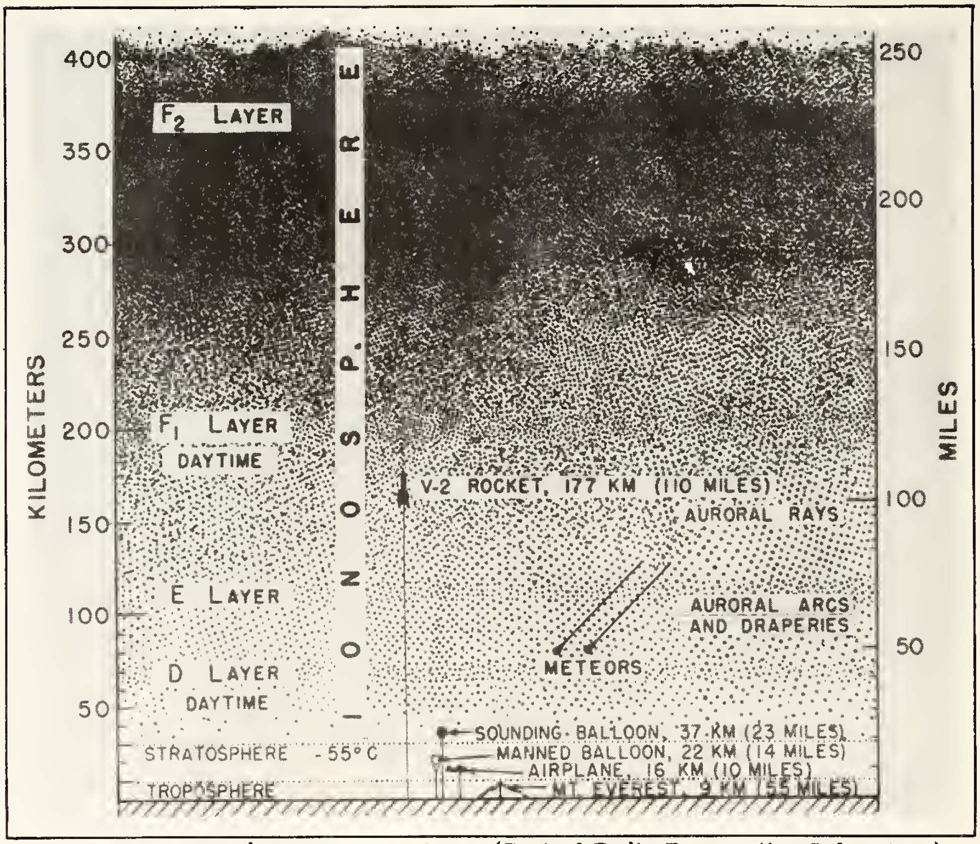

Fig. 2. The Earth's outer atmosphere. (Central Radio Propagation Laboratory)

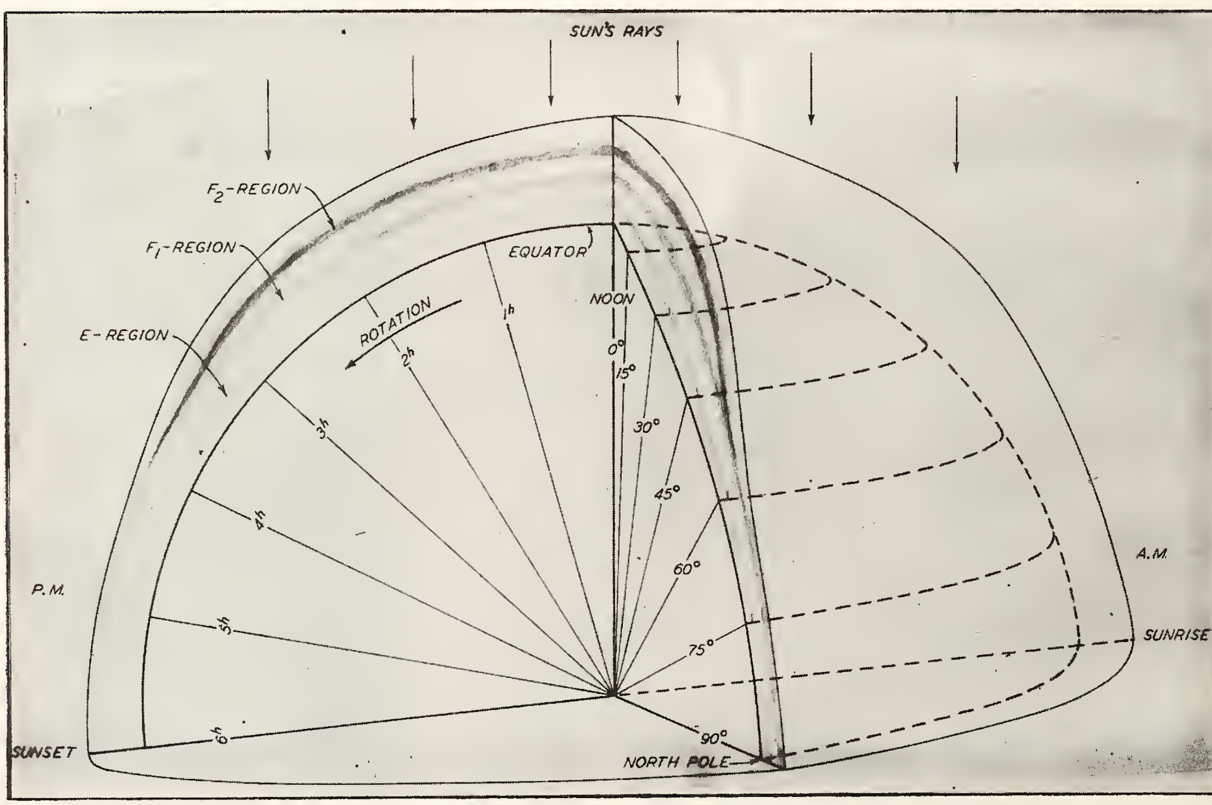

Fig. 3. Ion distribution in sunlit hemisphere in ionosphere

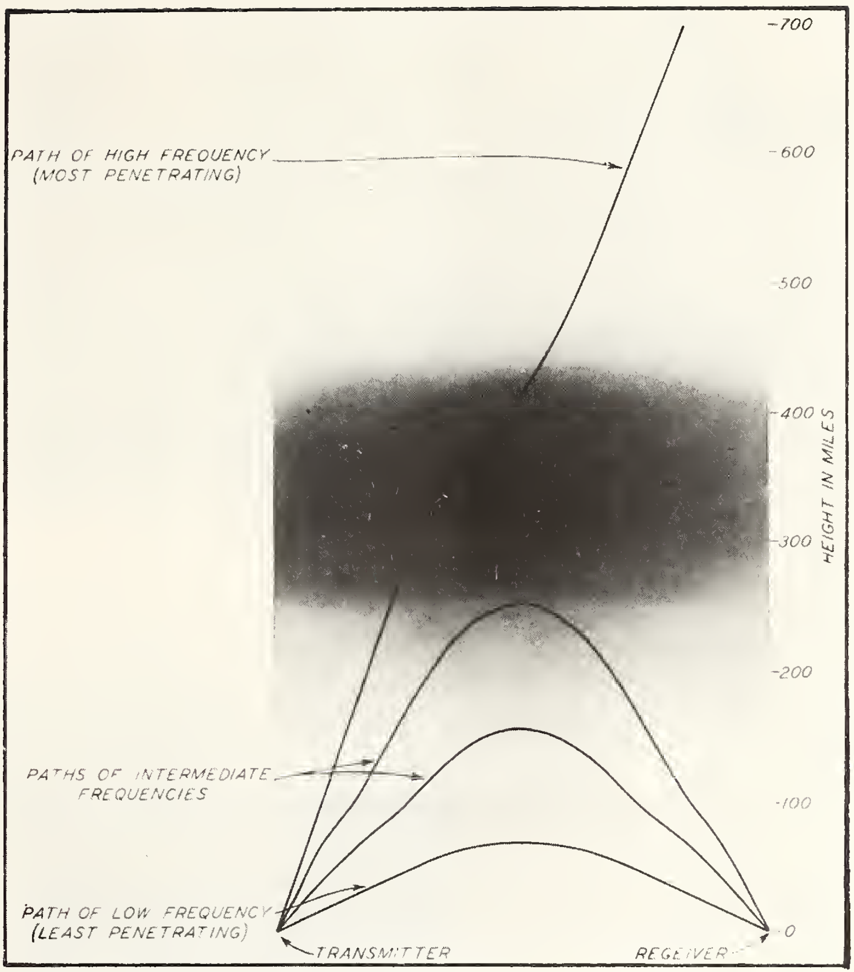

Fig. 4. Paths of radio waves of different frequencies in the ionosphere

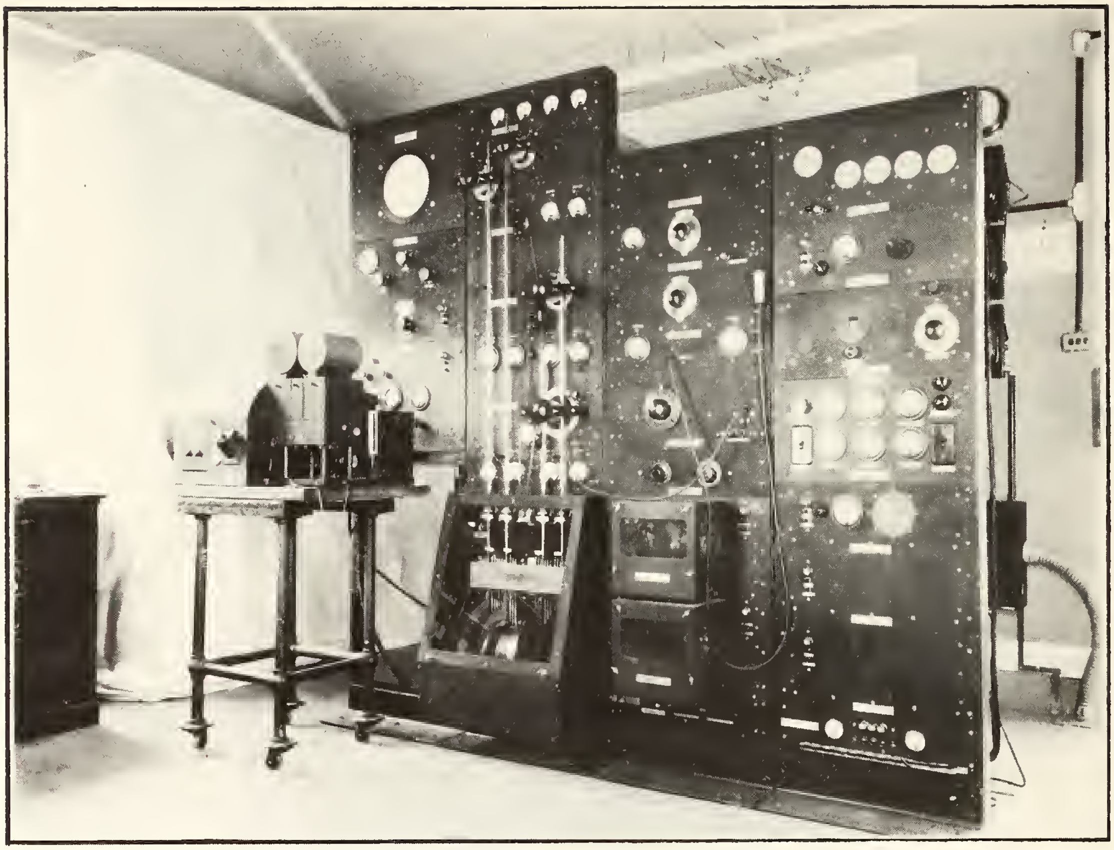

Fig. 5. Automatic multifrequency ionospheric apparatus

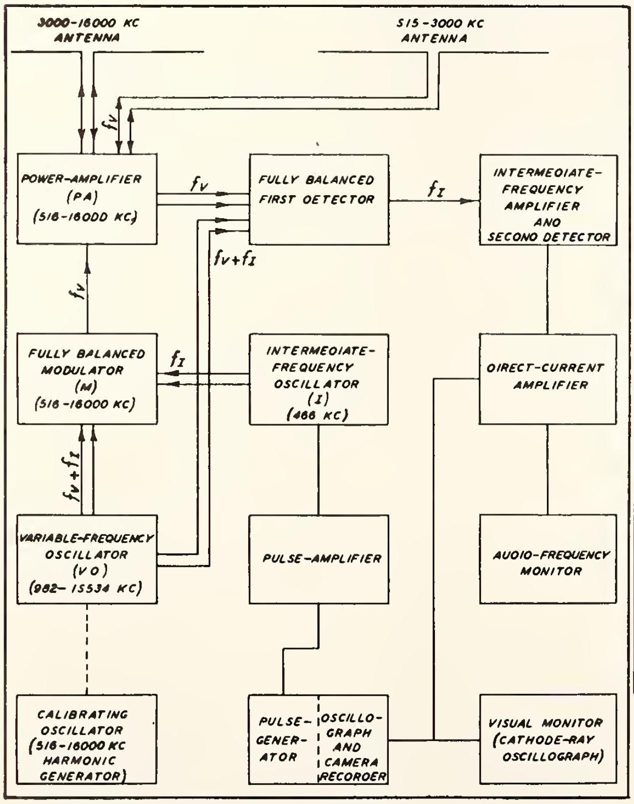

Fig. 6. Block diagram showing connection of units of automatic multifrequency apparatus

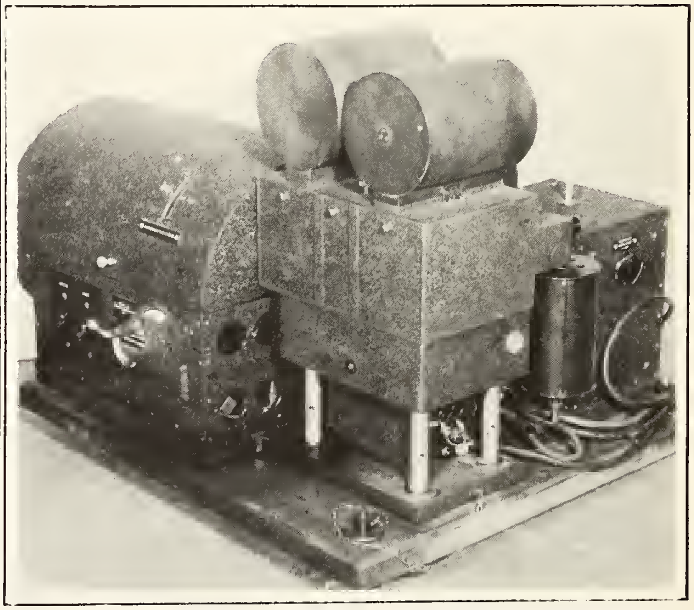

Fig. 7. Photographic recorder of automatic multifrequency apparatus

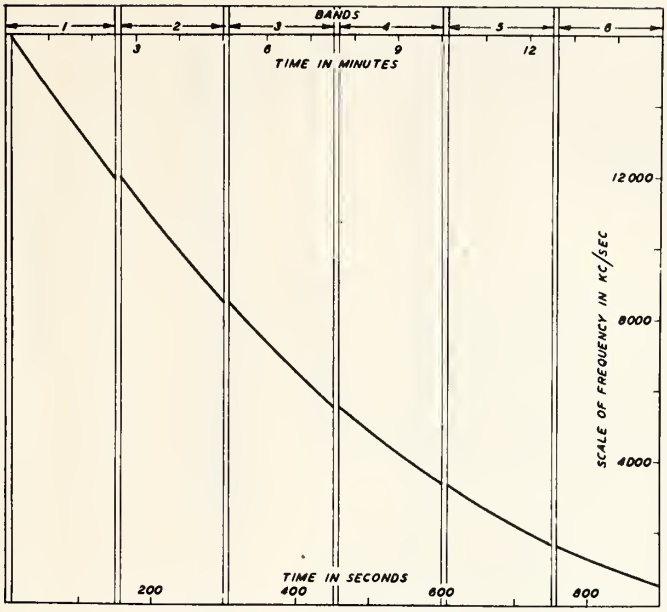

Fig. 8. Frequency versus time during one sweep of automatic multifrequency apparatus

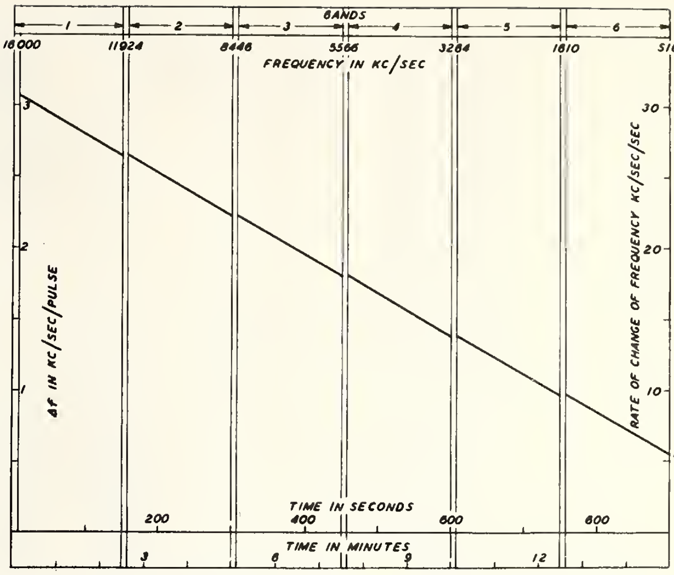

Fig. 9. Rate of change of frequency versus frequency and time and values of Δf for ten pulses per second

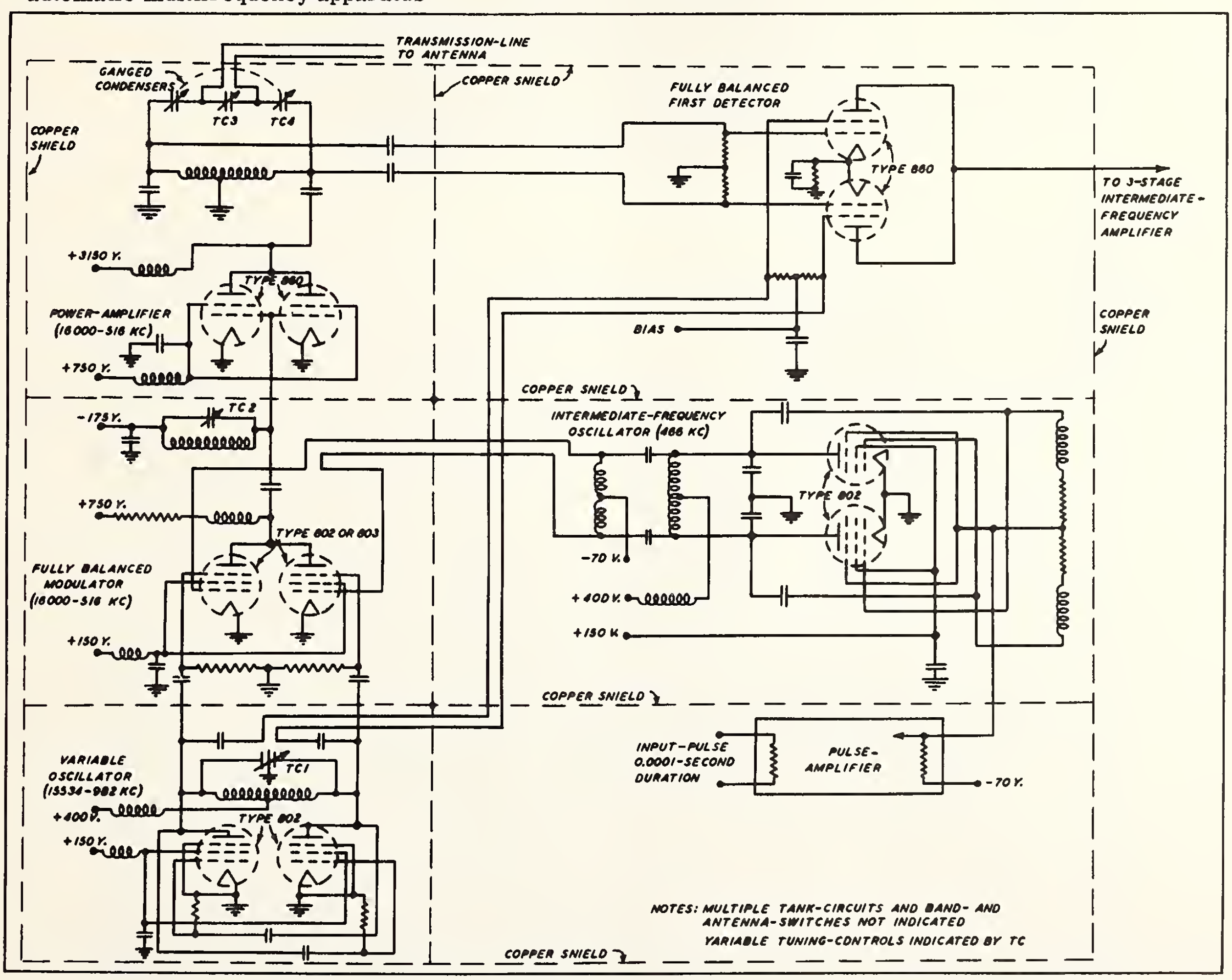

Fig. 10. Simplified schematic diagram of essential details, radiofrequency power circuits

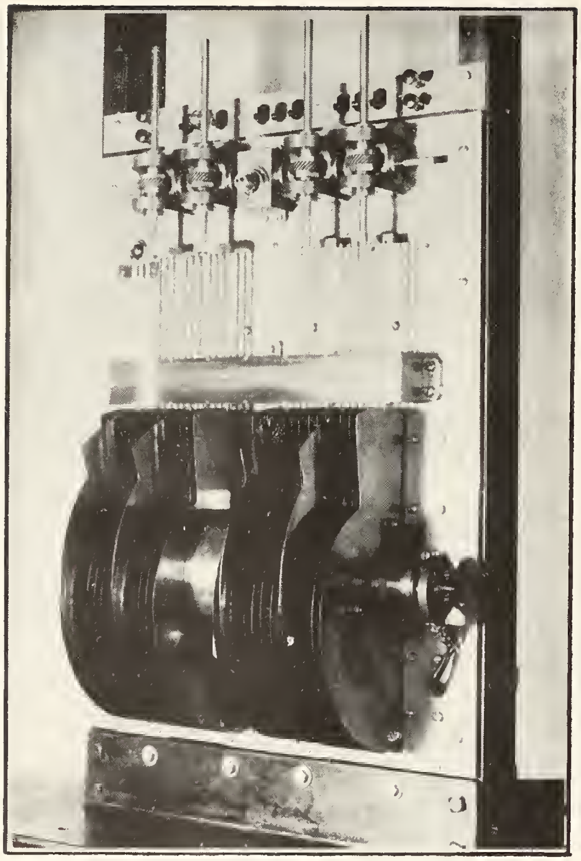

Fig. 11. Automatic tuning unit (covers removed)

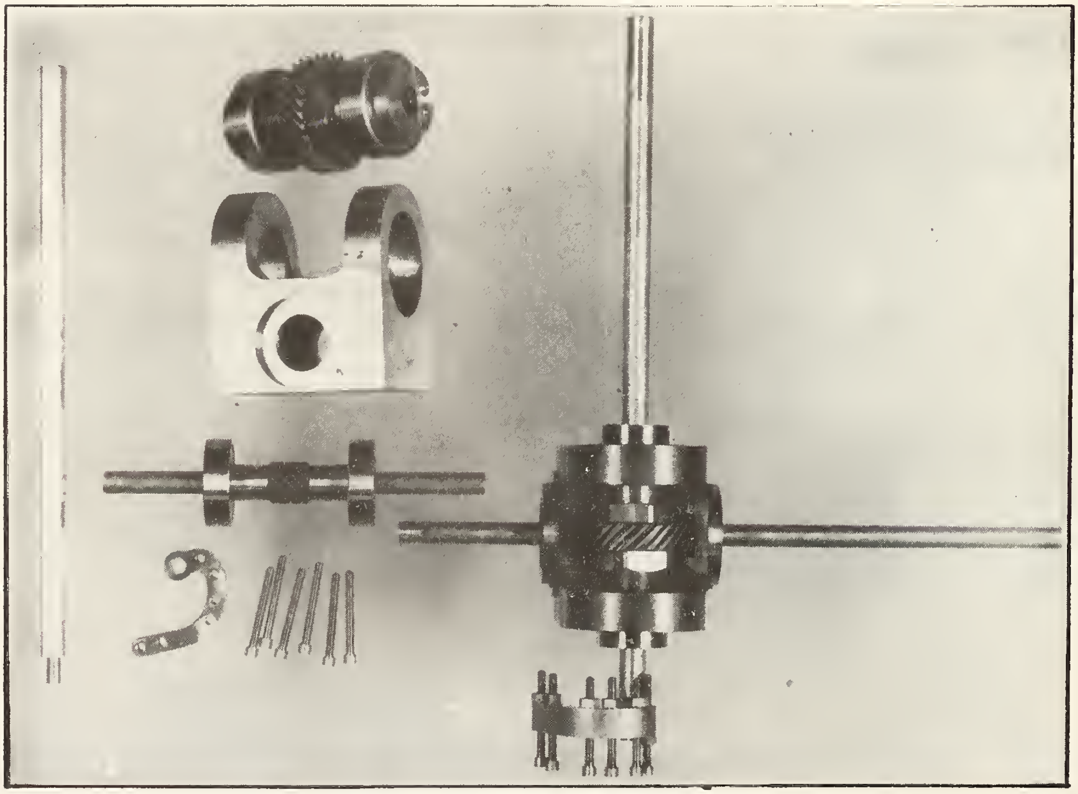

Fig. 12. Details of selector arms

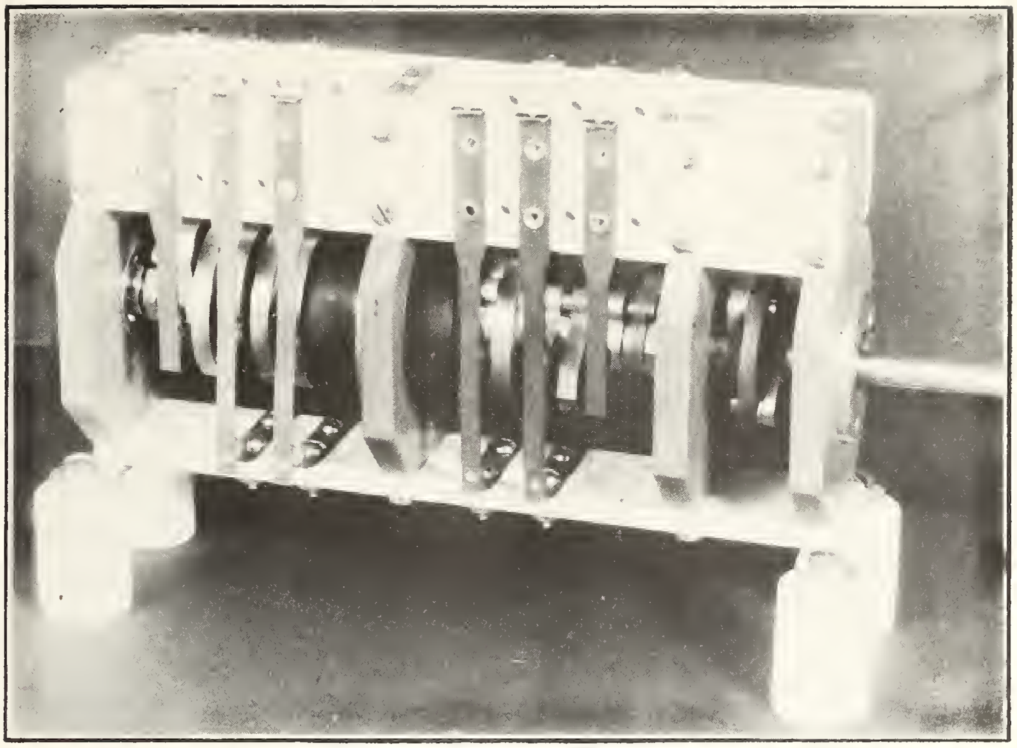

Fig. 13. Design of band switch

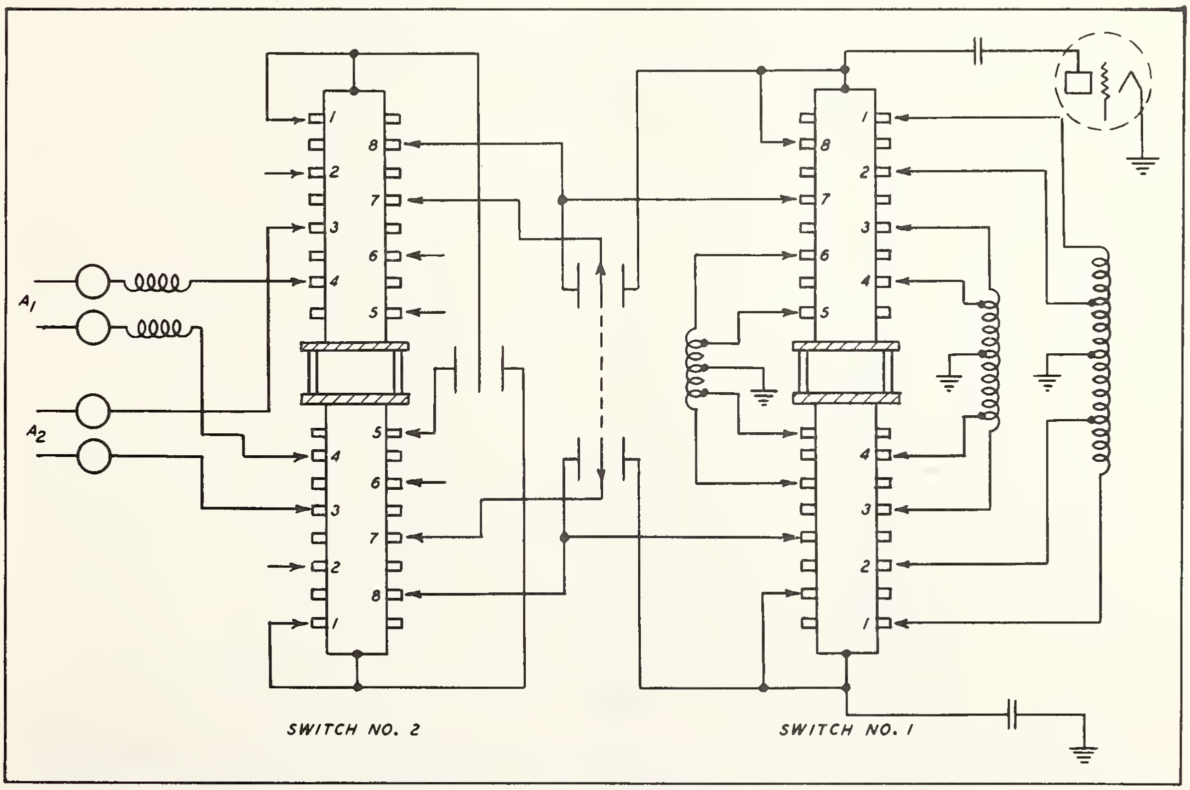

Fig. 14. Details of antenna-tuning network

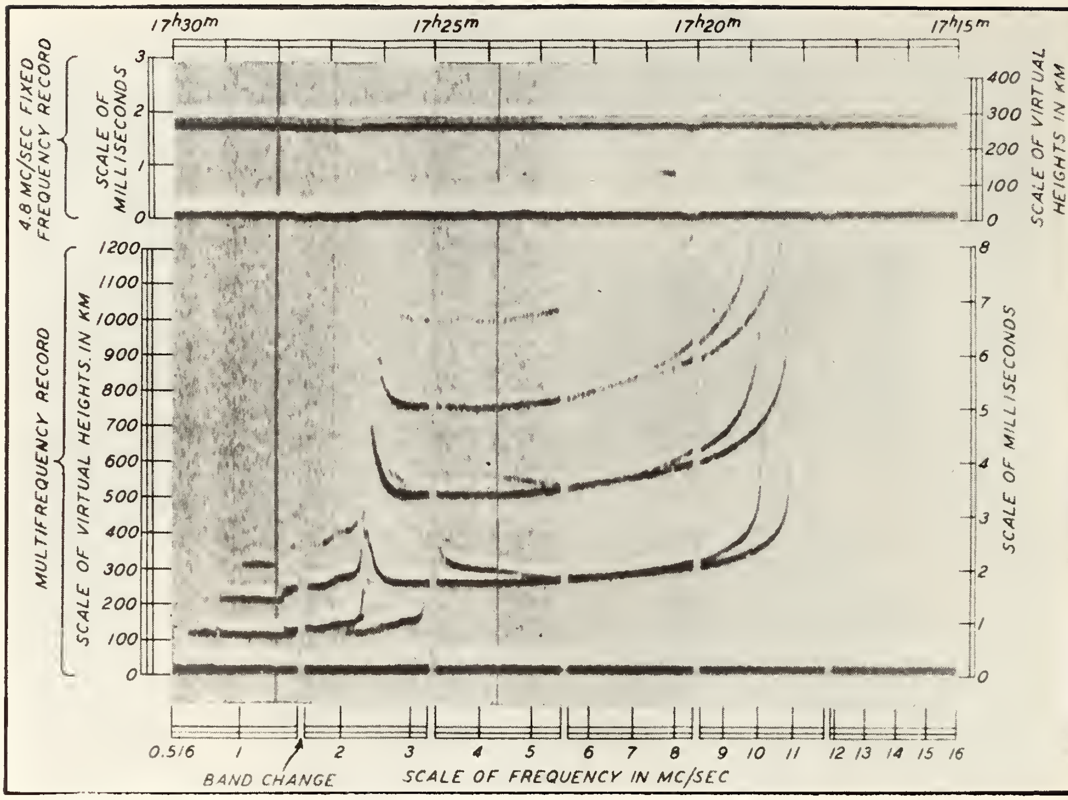

Fig. 15. Example of automatic multifrequency and fixed frequency ionospheric record

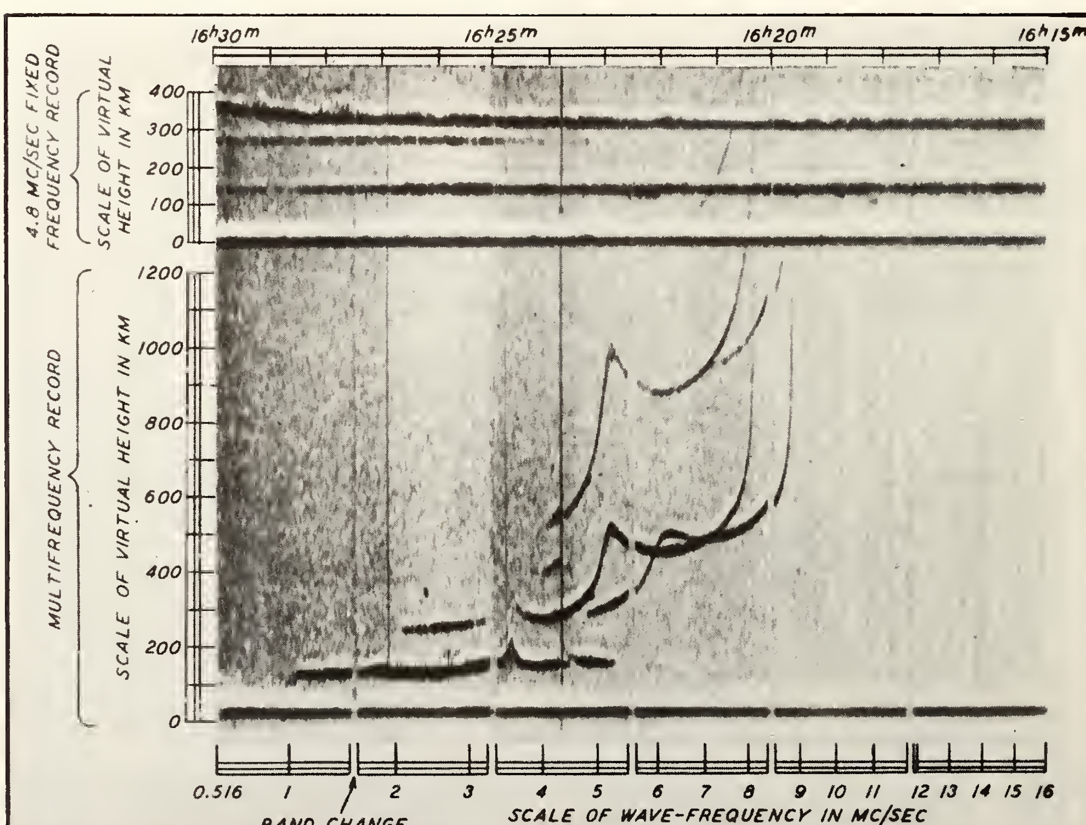

Fig. 16. Example of automatic multifrequency and fixed frequency ionospheric record

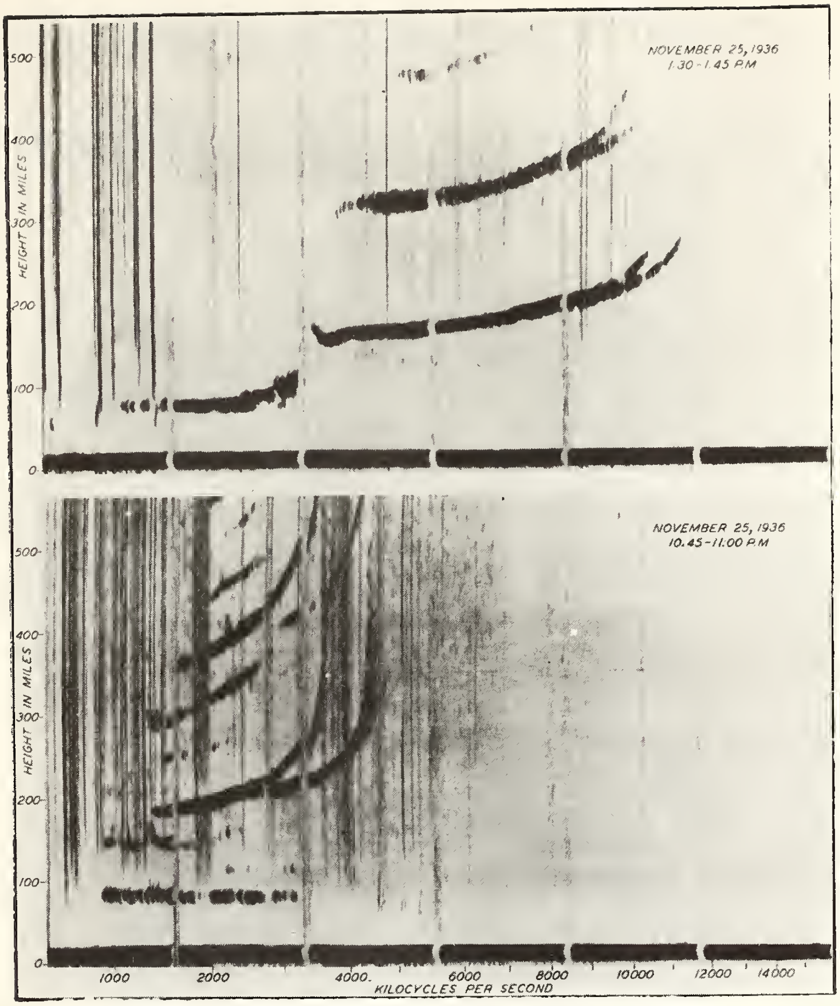

Fig. 17. Day and night conditions in the ionosphere

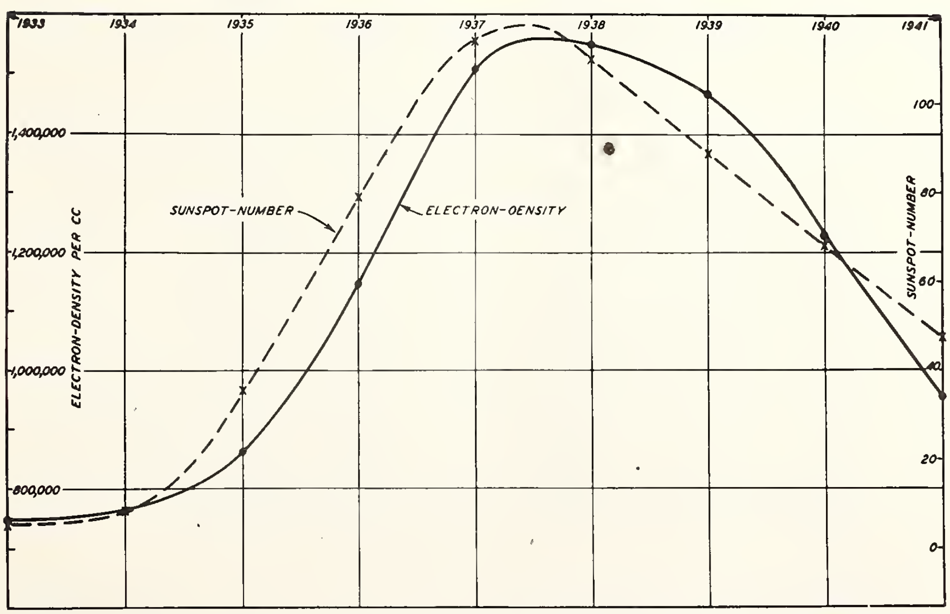

Fig. 18. Effect of sunspots on F2-region ionization. (Comparison of annual average sunspot number with annual average electron-density of F2-region, measured at noon at Huancayo Magnetic Observatory)

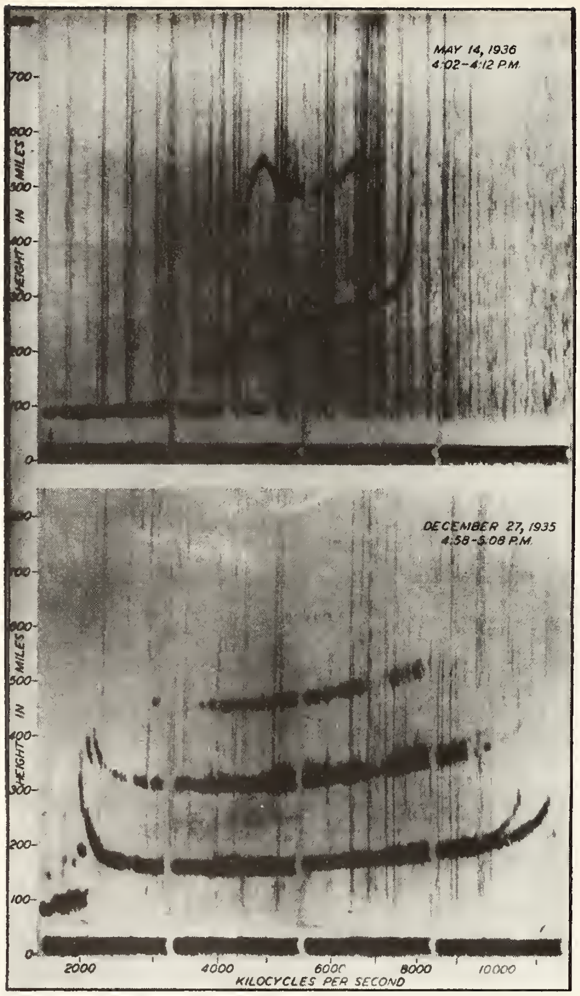

Fig. 19. Summer and winter conditions in ionosphere

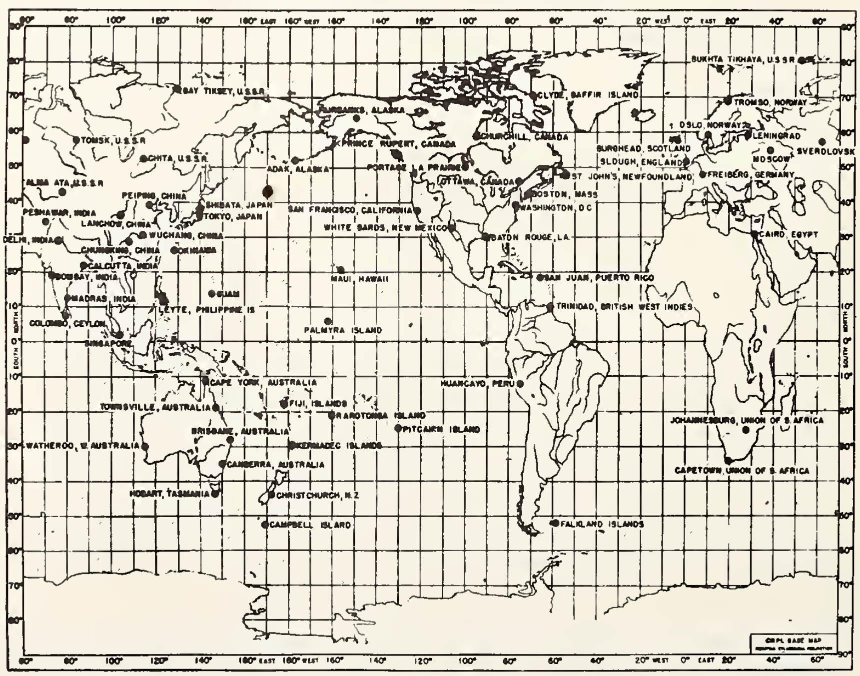

Fig. 20. World-wide distribution of ionospheric observatories, 1947

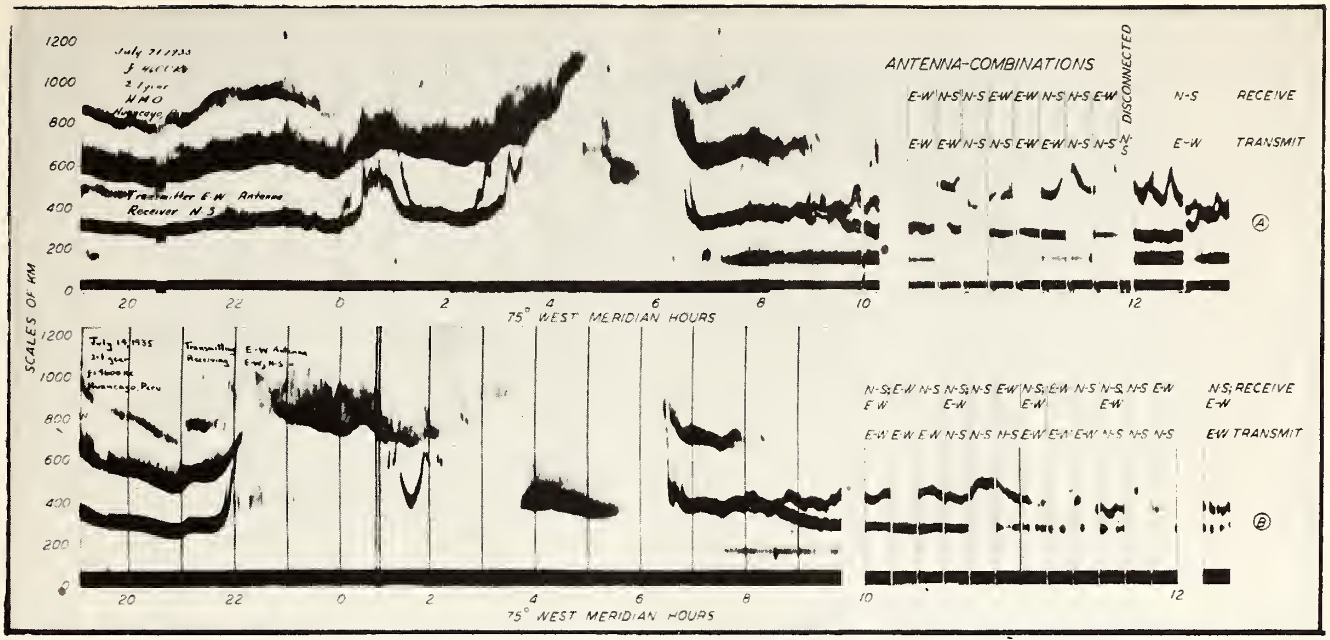

Fig. 21. Polarization experiments at Huancayo Magnetic Observatory, 1935

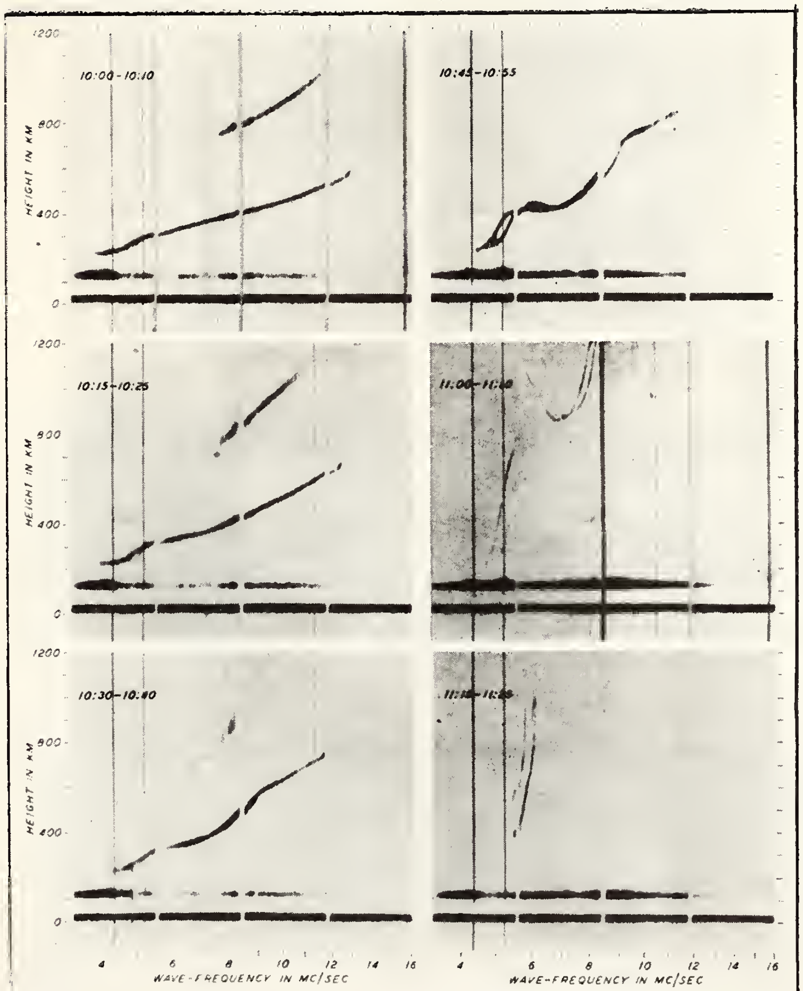

Fig. 22. Ionospheric disturbance during magnetic storm, March 24, 1940, Huancayo Magnetic Observatory

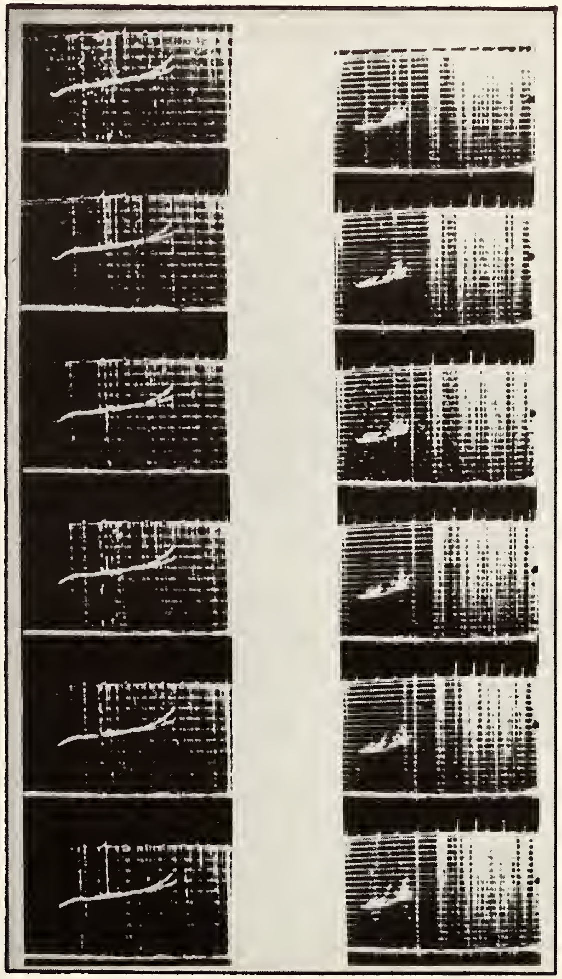

Fig. 23. Rapid ionospheric fluctuations during magnetic storm. (A) Six successive normal ionospheric 15-sec records during three minutes afternoon March 19, 1946; (B) Six successive disturbed ionospheric records during three minutes of magnetic storm, March 25, 1946, showing rapid change

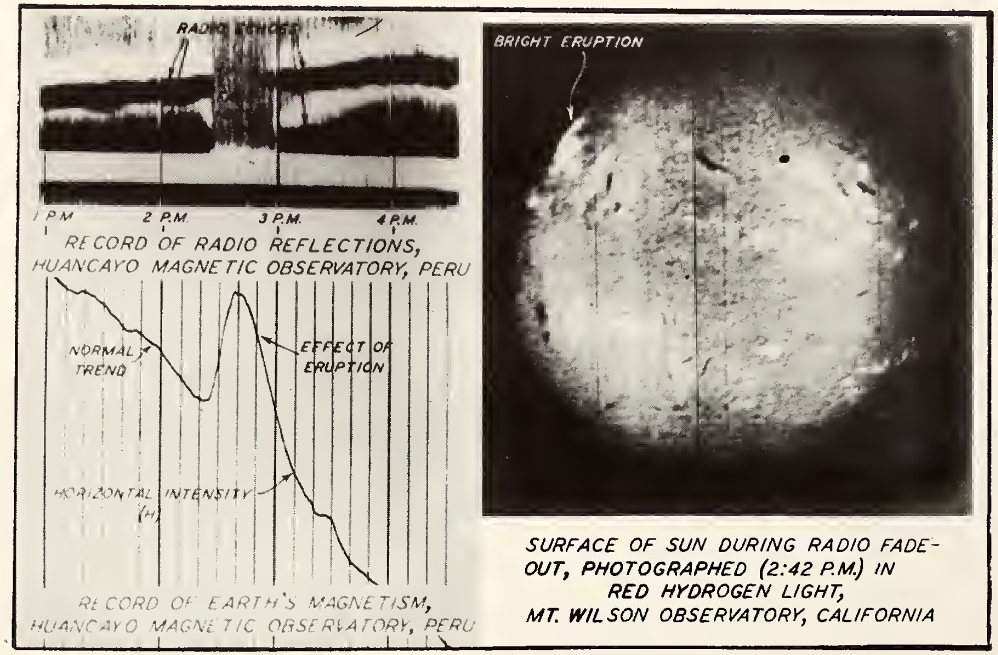

Fig. 24. Simultaneous occurrence, radio fade-out, solar flare, and magnetic pulse

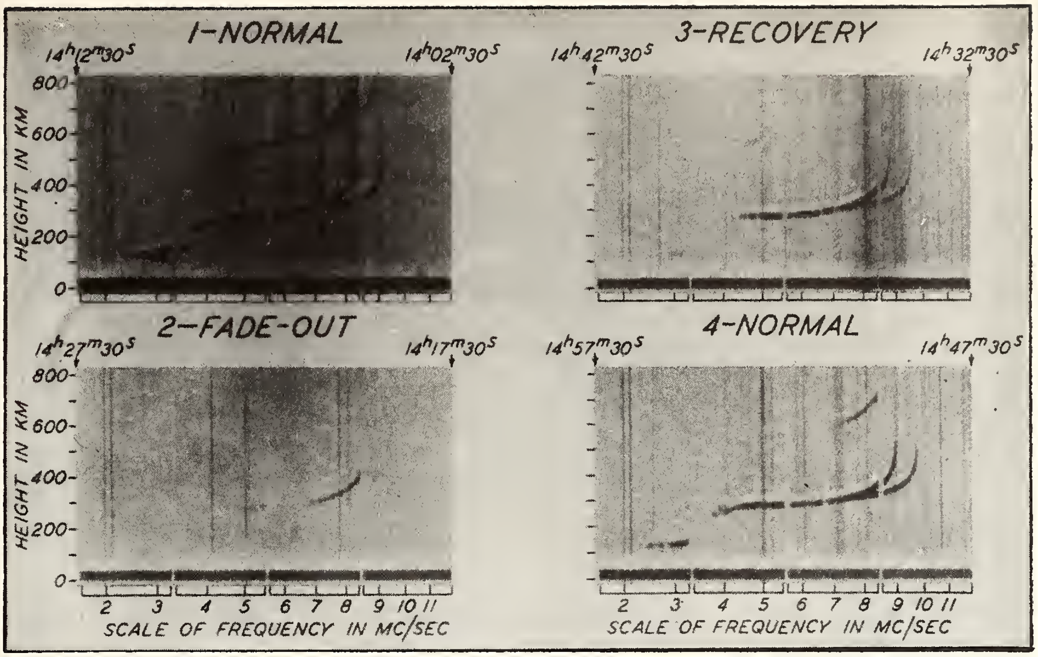

Fig. 25. Radio fade-out, illustrating characteristic sudden development and gradual recovery, Kensington Experimental Laboratory, February 26, 1941

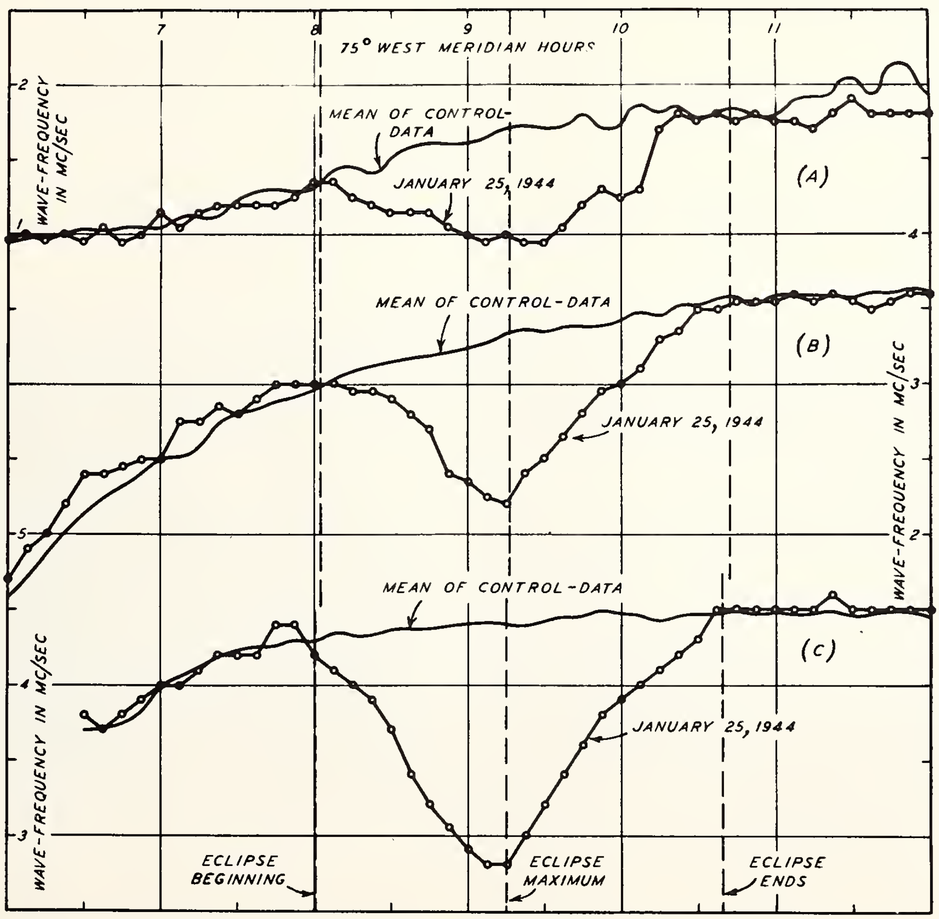

Fig. 26. Comparison of eclipse observations at Huancayo Magnetic Observatory, January 25, 1944, with mean of six control days. (A) Minimum frequency; (B) Critical frequency, E-region; (C) Critical frequency, F1-region

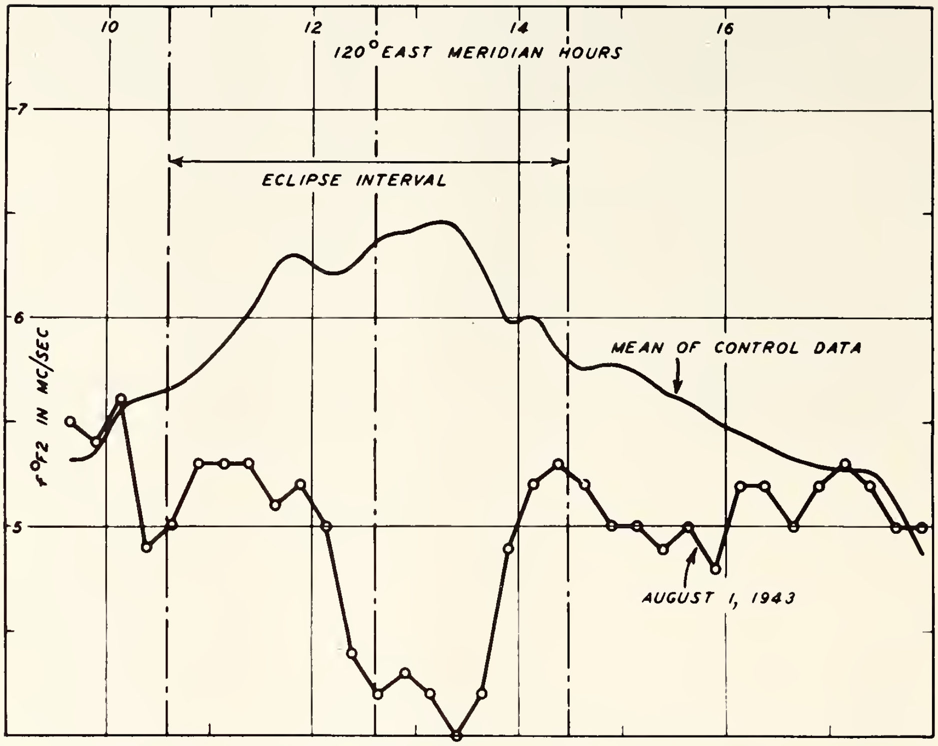

Fig. 27. Comparison of eclipse observations at Watheroo Magnetic Observatory, August 1, 1943, with control data

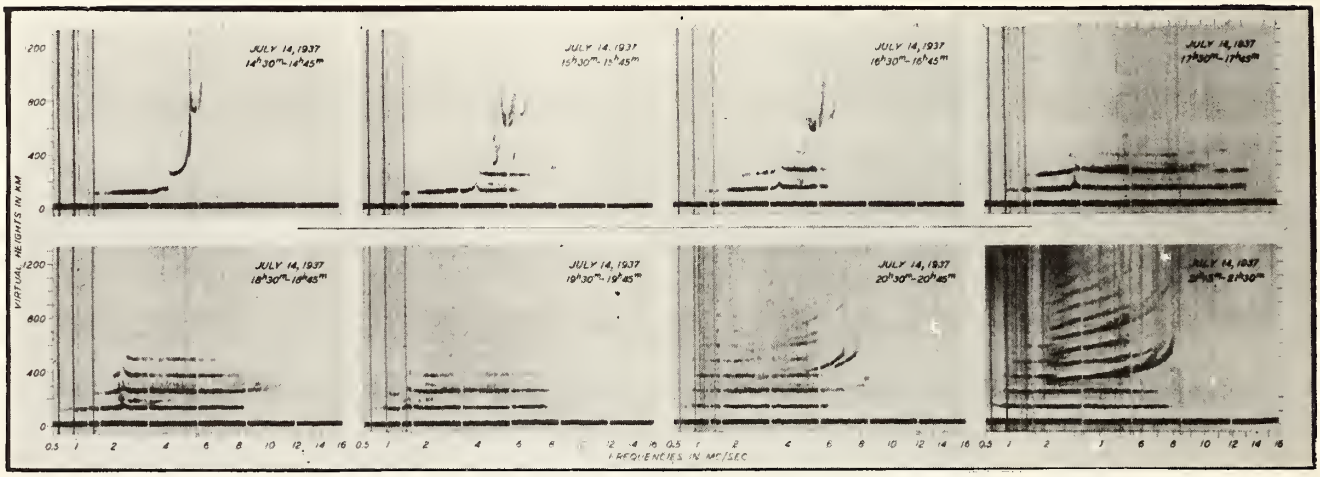

Fig. 28. Development of sporadic E ionization, Kensington Experimental Laboratory, July 14, 1937

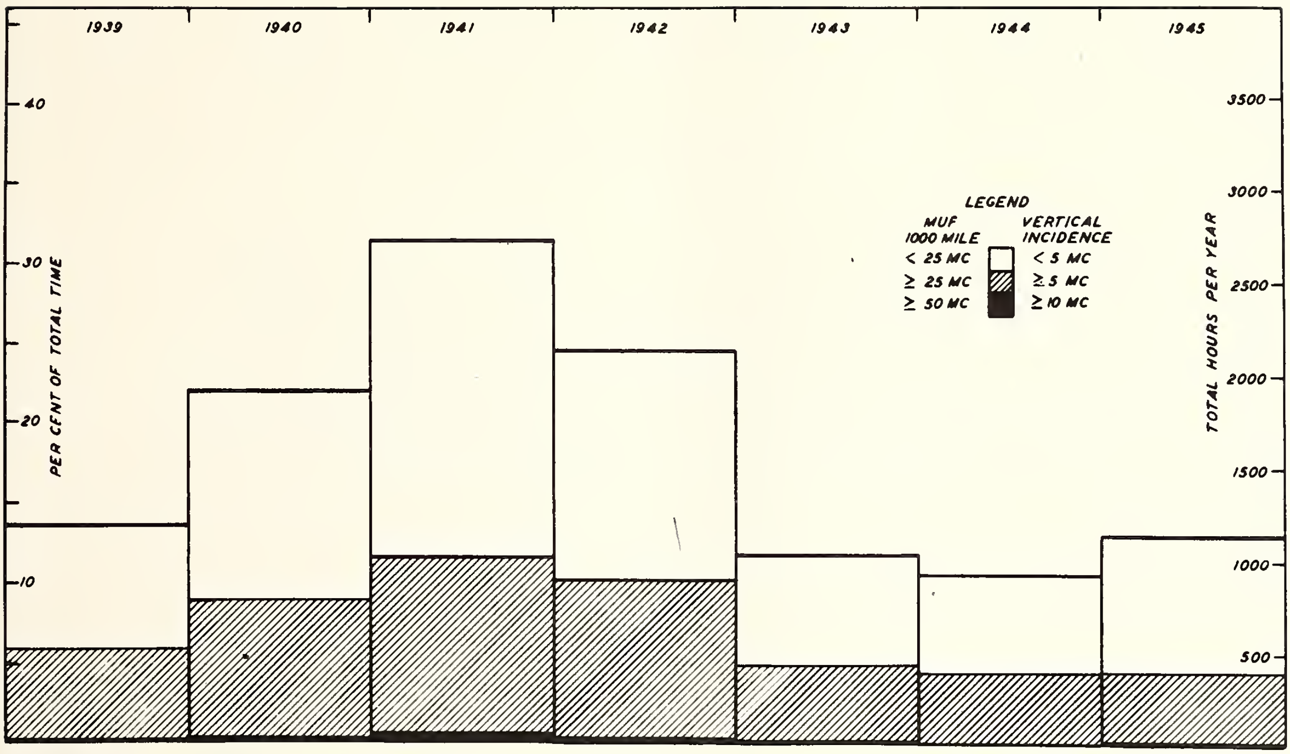

Fig. 29. Annual trend of sporadic E, Watheroo Magnetic Observatory, 1939-1945

TABLES OF RESULTS

EXPLANATORY NOTES AND COMMENTS

The ionospheric data published in this volume are:

(1) f^oF2 - Critical frequency of ordinary wave component, F2-layer.

(2) $h'F2$ - Minimum virtual height, F2-layer.

(3) f^oF1 - Critical frequency, F1-layer.

(4) $h'F1$ - Minimum virtual height, F1-layer.

(5) f^oE - Critical frequency, normal E-layer.

(6) f(min) - Lowest frequency at which reflections are recorded.

Of the above, f^oF2 and $h'F2$ are available and published on a full 24 hour per day basis. Night values represent f^oF and $h'F$ after the F1- and F2-layers have merged. The other data are tabulated for daylight hours only, centered around noon. E-layer heights are not included. Scalings of this factor were discontinued in the normal observatory program after an adequate sample revealed a constancy of E-layer heights which was within the experimental error of scalings. For most purposes, it will be adequate to assume E-layer heights of 100 km.

Ionospheric Data for Period After June 30, 1946.--It is expected that the ionospheric station described in this volume will continue in operation at the Watheroo Magnetic Observatory under the Department of Supply and Shipping, Bureau of Mineral Resources, Geology, and Geophysics, following the transfer of the observatory from the Carnegie Institution of Washington to the Commonwealth of Australia, effective July 1, 1947. Although no volumes supplementary to this one are contemplated, the basic ionospheric data for the station will be published in monthly bulletins of the Central Radio Propagation Laboratory, National Bureau of Standards of the United States Department of Commerce, which is acting as a co-ordinating organization for collection and dissemination of data from a world-wide network of stations.

JUNE 1938

TABLE 3

JUNE 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	3.5	3.7	3.7	3.8	4.0	4.0	5.4	8.2	9.6	10.8	10.7	10.4	10.7	11.1	10.6	10.1	9.3	8.1	6.4	4.7	3.8	3.9	3.9	6.8
2	3.8	4.1	4.3	4.5	4.6	4.4	3.2	5.1	7.9	9.9	10.0	11.5	9.2	9.5	10.7	11.2	10.9	9.2	7.2	4.3	3.5	3.7	3.8	3.9	6.7
3	3.9	4.3	4.2	4.1	4.5	3.4	2.8	4.6	7.4	10.8	11.1	11.2	11.4	11.8	10.5	11.8	11.1	10.1	9.3	5.7	4.7	4.1	3.5	3.5	7.8
4	4.0	3.5	3.7	4.1	3.9	3.3	3.2	4.5	7.6	9.5	10.5	10.3	10.1	10.0	9.6	10.6	10.9	10.0	8.4	5.4	4.0	3.6	3.8	3.9	7.3
5	4.0	4.1	4.1	4.1	4.4	4.2	4.0	4.6	8.1	8.8	10.8	10.2	9.6	9.8	9.8	10.3	10.5	9.5	6.8	5.5	5.3	4.3	4.2	4.1	6.7
6	4.0	3.4	3.0	3.1	3.8	4.0	4.0	5.2	8.0	9.2	9.6	10.4	10.4	10.1	10.5	10.6	10.1	8.6	7.0	4.8	4.6	3.6	3.5	3.8	6.5
7	4.0	4.0	4.2	4.1	4.0	3.6	3.4	5.1	8.3	10.2	10.9	10.3	9.8	9.0	10.5	10.3	9.4	8.7	6.7	4.6	4.3	3.6	3.5	3.6	6.5
8	3.6	3.9	3.8	3.9	3.9	3.8	3.7	4.8	7.7	9.4	10.3	10.6	10.2	10.2	10.6	11.3	11.0	9.6	6.1	6.6	5.7	4.7	4.9	4.6	6.9
9	3.9	3.4	3.7	3.6	3.9	3.6	3.6	5.7	8.8	9.4	10.7	10.7	11.3	10.6	10.5	9.8	10.2	8.7	6.5	4.7	3.5	3.6	3.6	3.7	6.6
10	3.8	3.8	3.8	3.7	3.7	4.0	3.3	4.6	7.6	...	...	10.5	10.7	10.1	9.3	9.1	9.3	9.0	...	...	3.8	3.6	3.5	3.9	...
11	4.0	4.0	4.0	4.6	4.9	4.1	3.5	5.0	8.2	...	11.6	11.5	11.9	12.2	12.8	11.6	11.2	10.0	7.4	4.1	3.6	3.0	3.6	3.0	...
12	3.2	3.8	3.7	3.9	3.9	2.7	2.7	...	8.6	9.4	10.1	11.4	11.2	10.3	11.5	11.6	10.7	10.0	6.3	5.6	3.5	2.9	2.8	3.0	...
13	3.0	3.1	3.1	3.9	4.3	3.3	3.5	5.4	8.2	9.1	9.9	9.8	11.2	11.7	12.4	12.0	10.6	9.4	9.1	6.4	5.3	3.9	3.6	4.0	6.9
14	4.1	4.3	4.6	3.4	3.5	2.8	3.0	4.0	7.8	8.8	10.5	9.8	9.8	10.5	9.8	10.6	10.2	10.2	6.0	4.1	4.5	3.5	3.4	3.2	6.4
15	3.4	3.7	3.9	3.5	3.4	3.6	2.7	4.4	6.6	8.2	9.2	9.1	9.6	9.2	9.9	10.2	9.3	8.7	6.6	3.8	3.3	3.3	3.0	2.9	5.9
16	3.3	3.7	4.0	4.1	4.1	4.5	3.3	4.9	7.4	8.0	8.7	9.0	10.0	9.4	9.4	10.0	9.2	9.6	6.9	4.5	3.6	3.1	3.3	3.6	6.2
17	3.4	3.6	4.3	4.9	4.3	4.2	2.5	4.2	7.1	8.4	9.7	9.5	9.3	9.9	9.9	9.5	9.8	8.8	7.5	5.0	4.0	3.7	3.6	3.7	6.3
18	3.9	4.2	4.3	4.5	5.4	2.9	2.8	4.3	7.3	9.4	9.2	9.3	9.4	9.9	9.1	9.2	9.2	8.3	5.5	3.3	2.8	2.2	2.2	2.7	5.8
19	2.8	2.7	3.0	3.3	3.3	3.8	3.3	3.7	5.3	7.2	8.1	8.4	9.3	8.9	8.6	8.4	8.0	8.8	5.4	4.3	3.2	3.1	3.3	3.2	4.9
20	3.1	3.8	3.9	3.6	3.4	3.3	2.9	4.1	6.5	8.0	8.8	8.6	8.4	8.6	8.3	9.5	8.0	6.1	2.9	2.9	3.2	3.0	3.1	3.1	4.8
21	3.3	3.5	3.7	3.8	4.2	4.2	3.7	4.6	7.0	7.5	8.4	8.4	7.9	8.2	9.1	...	9.2	8.7	6.3	4.3	3.8	3.4	3.6	3.8	...
22	4.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	8.2	8.9	9.1	9.3	9.1	7.5	6.0	4.8	4.1	3.2	2.7	2.9	...
23	3.0	3.3	3.4	3.3	3.3	3.1	3.1	4.7	6.9	8.9	8.2	9.1	9.1	8.8	8.0	9.0	8.1	7.5	6.0	3.9	4.0	2.7	2.8	3.3	5.6
24	3.4	3.7	3.5	3.2	3.6	3.5	3.5	5.0	6.6	7.9	8.6	9.5	8.4	8.2	7.7	8.6	8.4	7.9	5.6	4.3	4.0	4.0	3.3	3.5	5.7
25	3.8	3.9	3.8	3.7	4.2	4.0	3.8	4.7	7.9	8.8	8.2	9.1	8.9	8.7	9.3	9.1	9.3	8.0	6.6	4.4	3.5	3.3	2.8	2.9	6.0
26	3.2	3.5	3.9	4.0	3.8	3.7	3.6	5.2	7.4	7.3	8.8	10.1	9.1	7.9	7.8	8.4	9.1	7.0	6.0	5.8	3.0	2.9	3.3	3.6	5.8
27	3.7	4.0	4.1	4.2	4.4	3.9	3.0	4.4	6.9	8.7	8.2	9.3	8.8	8.8	8.3	9.1	8.9	6.6	6.3	4.6	3.6	3.3	3.7	3.7	5.9
28	4.0	3.8	4.1	4.1	4.1	3.7	3.9	4.3	6.8	6.7	8.3	9.5	8.6	8.9	8.6	8.7	8.1	7.9	6.0	3.5	3.3	3.4	4.0	3.4	5.7
29	3.7	4.0	4.3	4.3	4.2	4.0	3.4	4.2	6.7	8.0	8.5	...c	...c	...c	8.5	9.4	8.4	8.0	6.8	4.4	3.9	4.4	4.4	4.5	...
30	4.7	5.0	5.0	5.3	4.7	4.1	3.5	5.3	6.7	7.8	8.8	9.6	9.2	8.4	8.7	9.3	9.6	8.4	7.0	4.6	3.4	3.9	4.3	4.4	6.3
31																									
MEAN*	3.6	3.8	3.9	3.9	4.0	3.7	3.3	4.7	7.4	8.7	9.5	9.9	9.7	9.6	9.7	10.0	9.6	8.7	6.6	4.7	3.9	3.5	3.5	3.6	6.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 4

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1938 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	295	295	280	280	285	245	240	225	225	230	235	240	230	230	247	230	240	240	231	241	251	285	280	285	253
2	325	320	290	290	280	230	282	244	232	230	240	250	230	232	247	242	230	223	213	218	274	290	292	280	258
3	290	268	263	271	255	258	275	244	220	250	265	240	295	230	235	250	240	255	220	225	265	245	250	300	254
4	330	330	295	295	280	240	235	250	220	230	230	240	240	245	245	240	260	240	225	235	230	285	290	300	259
5	290	310	280	305	285	275	260	240	240	225	240	260	220	240	235	300	230	230	215	300	260	245	275	290	260
6	250	270	280	315	310	310	285	250	230	230	250	250	260	250	245	260	240	220	235	250	275	260	280	305	263
7	310	300	300	280	280	280	280	250	250	250	250	240	235	220	245	...	...	...	220	280	280	...	...	320	...
8	310	290	290	300	295	295	280	265	220	235	240	255	240	230	225	245	235	220	260	280	250	250	320	280	263
9	260	325	290	285	270	285	290	255	235	235	220	230	240	240	255	230	230	220	210	260	320	290	310	300	262
10	290	295	285	295	280	280	295	240	220	...d	...d	...d	...d	...d	...d	260	...d	...d	...d	...d	...d	...d	...d	...d	...
11	...d	...d	...d	...d	...d	...d	...d	...d	240	...c	240	245	225	255	260	255	235	235	200	300	285	300	270	295	...
12	285	280	285	260	230	265	300	...	245	235	220	250	260	245	275	270	225	220	220	260	210	315	315	285	...
13	295	300	325	285	255	250	235	260	220	235	235	255	285	275	265	250	220	230	220	225	275	295	320	350	265
14	325	285	250	250	245	260	295	255	220	225	235	225	240	245	250	260	245	220	210	300	255	265	320	300	257
15	340	320	285	275	270	240	220	225	220	230	235	215	205	250	300	270	250	250	230	280	290	280	270	310	261
16	310	320	300	285	290	250	245	230	220	240	245	270	285	255	260	280	235	240	230	260	260	290	275	310	266
17	310	320	310	290	255	230	275	250	230	230	235	250	265	260	260	245	260	240	235	245	270	265	275	330	264
18	340	325	300	300	280	285	...	285	225	260	265	290	265	295	265	270	265	250	250	275	295	...	...	355	...
19	360	340	335	300	290	270	265	250	230	240	225	235	260	240	235	245	250	250	250	255	285	285	290	305	270
20	355	325	285	315	290	255	275	250	225	250	260	240	265	260	280	255	240	215	...	...	285	290	285	320	...
21	350	335	315	315	315	305	285	255	235	235	245	255	260	250	300	...	250	230	225	285	280	310	340	330	...
22	280	...	...	...	...	...	...	...	...	...	...	...	235	240	255	275	255	225	270	240	280	260	...	...	...
23	...	...	280	275	300	295	260	240	220	240	245	230	270	250	230	245	230	225	230	290	240	...	...	320	...
24	280	295	260	265	285	280	280	235	230	240	220	245	255	250	245	280	245	225	230	265	265	240	280	295	258
25	285	265	280	280	265	265	265	255	240	225	220	240	230	240	255	245	240	220	220	235	245	250	270	270	250
26	280	305	260	260	250	260	290	255	230	235	245	245	290	255	225	255	235	225	225	235	240	275	270	280	255
27	300	280	280	280	250	240	240	245	245	240	240	260	275	260	240	260	240	230	235	230	265	240	275	295	256
28	290	285	275	280	250	255	265	235	230	235	250	240	260	260	255	245	240	240	230	250	280	290	260	320	258
29	290	295	280	280	250	255	250	240	240	240	...c	...c	...c	...c	270	255	240	235	230	250	245	260	290	285	...
30	310	300	270	265	270	255	300	240	215	265	240	240	260	250	280	250	260	240	230	240	...	300	300	295	...
31																									
MEAN*	305	303	287	285	274	265	269	238	229	238	240	246	253	248	255	256	242	232	229	257	266	275	288	304	262

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 5

JUNE 1938 JUNE 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	4.6	...	...	4.0	...	...	...	...
2	...	...	...	...	...	4.6	...	...	...	...	...	...	...
3	...	...	...	...	4.9	4.9	5.2	...	...	...	...	...	...
4	...	...	...	...	...	...	...	4.6	4.4	...	...	...	...
5	...	...	...	...	...	4.5	...	...	4.3	5.5	...	...	...
6	...	...	...	...	3.9	...	4.9	4.9	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	5.0	...	...	...	...	...	...	...
9	...	...	...	...	...	...	4.6	4.4	4.9	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	4.7	...	...	...	...
12	...	...	...	...	...	5.0	4.7	4.4	5.1	4.4	...	...	...
13	...	...	...	...	...	4.9	5.0	4.8	5.0	4.3	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	4.6	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	4.6	...	5.1	...	...	...	...	...
19	...	...	...	...	...	...	4.8	...	...	...	...	...	...
20	...	...	...	...	...	...	4.9	...	...	...	...	...	...
21	...	...	...	...	...	...	...	4.6	...	...	...	...	...
22	...	...	...	...	...	...	4.8	4.8	...	...	...	...	...
23	...	...	...	...	...	3.6	4.6	4.8	...	5.0	...	...	...
24	...	...	...	...	...	...	4.5	4.4	4.2	4.6	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	4.9	4.6	...	...	...	...
27	...	...	...	...	...	4.5	5.0	4.6	4.2	...	...	...	...
28	...	...	...	...	...	...	4.8	4.7	4.6	...	...	...	...
29	...	...	...	...	...	...	...	...	4.6	...	...	...	...
30	...	...	...	...	...	...	4.7	...	4.9	...	...	...	...
31													
* MEAN	...	...	...	...	4.4	4.6	4.8	4.7	4.6	4.8	...	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	220	...	...	237	...	...	...	...
2	...	...	...	...	...	230	...	...	...	...	...	...	...
3	...	...	...	...	240	220	220	...	...	...	...	...	...
4	...	...	...	...	...	...	...	220	230	...	...	...	...
5	...	...	...	...	...	190	...	...	210	220	...	...	...
6	...	...	...	...	220	...	220	215	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	240	...	...	...	...	...	...	...
9	...	...	...	...	...	...	230	230	230	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	235	...	...	...	...
12	...	...	...	...	...	240	225	220	250	240	...	...	...
13	...	...	...	...	...	230	230	215	235	240	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	215	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	235	...	240	...	...	...	...	...
19	...	...	...	...	...	...	200	...	...	...	...	...	...
20	...	...	...	...	...	...	230	...	...	...	...	...	...
21	...	...	...	...	...	...	...	230	...	...	...	...	...
22	...	...	...	...	...	...	210	220	...	...	...	...	...
23	...	...	...	...	...	...	215	240	...	210	...	...	...
24	...	...	...	...	...	...	210	220	225	220	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	215	215	...	...	...	...
27	...	...	...	...	...	220	230	240	215	...	...	...	...
28	...	...	...	...	...	...	220	235	230	...	...	...	...
29	...	...	...	...	...	...	...	...	220	...	...	...	...
30	...	...	...	...	...	...	225	...	235	...	...	...	...
31													
* MEAN	...	...	...	...	230	225	220	226	227	226	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 6

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1938

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1														...	1.6	2.4	3.0	3.2	3.3	3.6	3.4	3.3	3.0	...	...	...
2														...	...	2.8	2.8	3.3	3.4	3.3	3.4	3.3	...	...	...	...
3														...	...	...	3.0	3.1	3.3	3.5	3.4	3.3	3.1	2.7	...	...
4														...	...	2.3	3.2	...	3.3	3.5	3.4	3.3	3.0	2.6	...	...
5														...	...	2.3	...	...	3.4	3.5	3.4	3.3	3.1	2.8	2.2	...
6														...	...	2.7	2.9	3.3	3.5	3.5	3.3	3.3	3.0	...	...	...
7														...	...	2.7	3.0	3.3	3.4	3.5	3.4	3.2	...	...	...	...
8														...	1.7	2.6	2.9	3.2	3.3	3.5	3.4	3.3	3.1	...	...	...
9														...	...	2.4	3.0	3.3	3.5	3.5	3.4	3.3	3.0	2.7	...	...
10														...	...	...	...	...	...	...	...	...	...	...	...	...
11														...	...	2.4	...	3.3	3.4	3.3	3.3	3.2	2.9	...	...	...
12														...	...	2.8	2.9	3.2	3.3	3.3	3.5	3.3	3.1	...	...	...
13														...	...	2.8	2.9	3.3	3.4	3.7	3.3	3.4	3.2	2.8	...	...
14														...	...	...	3.0	3.3	3.5	3.4	3.4	...	...	...	...	...
15														...	...	2.9	2.9	3.4	3.3	3.3	3.3	3.2	3.1	...	...	...
16														...	...	...	2.9	3.0	3.3	3.2	3.3	3.2	3.0	...	...	...
17														...	...	...	2.7	3.1	3.3	3.4	3.4	3.3	2.9	2.6	...	...
18														...	...	...	3.0	...	3.2	3.3	3.3	3.2	...	...	...	...
19														...	...	...	2.7	3.1	3.3	3.4	3.5	3.3	3.3	...	...	...
20														...	...	...	2.9	3.2	3.3	3.3	3.3	3.1	...	...	...	...
21														...	...	...	3.0	3.3	3.3	3.7	3.3	3.2	...	...	...	...
22														...	...	...	...	...	...	3.4	3.3	3.1	2.7	...	...	...
23														...	...	...	3.0	3.3	3.4	3.3	...	3.2	2.8	...	...	...
24														...	...	...	3.0	3.2	3.3	3.3	3.3	3.1	3.1	...	...	...
25														...	...	2.6	2.9	3.1	3.3	3.4	...	3.3	3.0	2.6	...	...
26														...	...	...	2.8	3.0	3.2	3.4	3.3	3.1	3.4	2.7	...	...
27														...	...	2.7	3.0	3.2	3.3	3.5	3.4	3.4	...	...	...	...
28														...	...	...	2.9	3.1	3.3	3.4	3.3	3.3	3.0	2.7	1.9	...
29														...	...	2.5	...	...	...	...	...	3.1	3.1	2.7	...	...
30														...	...	2.2	2.9	3.3	3.3	3.6	3.4	3.5	3.0	2.7	...	...
31																										
MEAN*														...	1.6	2.6	2.9	3.2	3.3	3.4	3.4	3.2	3.0	2.7	2.0	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 7

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1938 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JULY 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.2	4.2	4.4	4.5	4.4	4.2	3.3	5.0	7.5	7.7	7.8	8.0	9.7	8.8	8.9	10.3	10.5	8.0	6.5	4.9	4.0	4.4	4.0	4.4	6.2
2	4.0	3.0	3.0	3.3	3.3	3.0	3.1	5.5	8.1	8.6	8.7	9.3	9.1	8.6	8.0	10.2	10.6	10.0	7.2	4.2	3.3	3.2	3.0	3.5	6.0
3	3.6	3.6	3.7	3.6	3.9	3.7	3.7	4.1	7.0	7.7	9.0	9.4	8.9	8.9	9.0	8.7	10.8	9.0	6.9	4.9	4.6	3.2	3.2	3.5	6.0
4	3.7	4.0	4.1	2.9	3.0	2.9	2.9	4.8	7.3	7.8	9.3	8.8	9.7	8.9	9.0	9.2	9.2	9.1	6.5	4.7	3.8	3.5	p3.5c	p3.5c	p5.9
5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.8	8.1	9.5	10.5	11.4	11.1	10.5	8.5	6.7	4.5	4.0	4.1	4.0	3.8	...
6	3.4	3.5	3.7	4.1	3.8	3.6	3.5	4.9	8.0	9.6	10.2	9.3	10.0	p10.0a	9.8	9.3	10.7	10.2	9.0	6.3	3.9	3.1	3.4	3.4	p6.2
7	3.6	3.7	3.8	3.5	3.0	2.5	2.5	5.0	8.0	9.0	9.6	9.7	9.7	10.0	8.6	9.6	9.6	9.1	6.8	4.6	3.7	3.2	3.0	2.8	6.0
8	2.8	2.9	3.0	3.0	3.0	2.9	3.1	5.0	7.8	8.4	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.4	9.0	9.6	10.0	...c	8.4	8.7	7.0	5.0	3.6	3.7	3.0	2.6	...
10	2.8	3.0	3.0	2.9	3.1	3.0	3.0	5.2	7.5	9.2	10.6	10.6	10.8	10.1	10.0	10.1	10.5	11.0	9.2	6.5	4.2	3.9	3.7	3.9	6.6
11	4.1	3.8	3.3	2.9	2.7	2.3	2.6	...c	8.7	9.0	9.0	10.9	...c	11.2	...c	...c	10.6	8.6	7.4	6.1	4.8	4.4	4.7	4.1	...
12	4.0	4.1	4.1	4.0	4.1	3.1	2.7	4.5	8.0	9.0	10.6	11.0	10.7	10.3	10.3	10.4	10.0	9.8	6.8	5.2	3.9	3.4	3.1	3.5	6.5
13	3.4	3.1	3.4	3.6	3.3	3.0	3.0	4.5	7.4	8.9	9.7	9.0	10.4	10.0	9.5	10.0	9.9	8.9	6.7	5.1	4.6	3.1	3.6	3.7	6.2
14	3.8	4.0	4.1	4.4	4.1	3.5	2.7	4.7	7.1	9.8	10.2	9.5	9.5	10.1	11.0	10.8	9.8	9.7	7.2	6.3	5.8	4.0	4.0	3.9	6.7
15	3.9	3.6	3.5	3.4	3.3	3.1	3.0	5.2	8.6	9.4	10.0	10.3	9.8	9.8	10.4	10.8	10.2	8.4	8.4	5.5	5.0	4.4	4.6	4.3	6.6
16	4.1	4.3	4.3	4.1	3.7	2.9	3.1	4.5	7.3	...c	...c	...c	10.8	11.5	11.0	11.0	10.3	9.4	6.7	6.5	3.4	3.3	3.1	2.5	...
17	2.3	...c	...c	...c	...c	...c	...c	4.9	7.0	7.6	8.6	...c	9.5	10.1	9.9	10.5	10.2	10.4	8.9	7.2	5.2	3.8	3.6	3.0	...
18	2.7	2.8	3.0	2.7	3.0	2.8	2.5	2.2	4.6	9.1	9.5	10.6	9.8	8.4	8.8	9.0	9.3	7.7	6.4	5.5	4.5	3.0	2.9	2.8	5.6
19	3.0	3.0	3.0	3.2	3.1	2.9	2.7	5.0	7.4	8.0	9.2	9.9	9.2	9.5	9.4	9.6	8.8	7.9	7.4	5.1	3.5	3.0	3.1	3.5	5.8
20	3.3	2.7	2.3	2.8	2.9	3.0	2.7	4.6	7.3	7.9	8.9	10.0	9.0	8.2	9.6	9.0	8.9	8.7	7.4	6.2	4.9	3.3	3.6	3.7	5.9
21	3.8	3.9	4.0	4.0	3.5	3.2	3.3	5.2	7.8	9.2	11.0	9.5	9.8	10.2	p9.5c	9.0	9.6	8.6	7.2	5.7	4.2	3.7	3.6	3.4	p6.4
22	3.5	3.2	3.1	3.3	3.0	3.1	3.2	5.0	8.5	8.5	10.3	10.7	10.5	9.2	10.5	10.3	9.5	8.1	8.1	6.2	5.1	4.0	3.5	3.0	6.4
23	2.9	3.1	3.1	3.3	2.9	3.0	2.8	5.1	8.1	9.2	10.3	9.8	9.2	10.1	9.8	10.4	10.1	8.3	7.4	5.4	4.5	3.7	3.8	3.9	6.3
24	3.9	3.6	3.4	3.9	3.6	3.4	3.0	5.2	8.3	10.1	10.4	9.5	10.9	p10.5c	10.1	9.1	10.2	9.4	7.6	6.1	5.8	4.1	3.9	3.5	6.6
25	3.7	3.5	3.4	3.6	3.6	3.5	3.5	5.5	8.4	9.4	10.3	10.4	9.8	10.2	9.6	9.3	9.4	9.3	8.0	5.1	4.0	3.8	3.4	3.5	6.4
26	3.4	3.5	3.7	3.6	3.8	3.6	3.4	5.4	7.6	...c	...c	...c	9.8	9.1	8.7	9.2	9.2	9.4	8.1	4.1	4.1	4.1	3.7	3.5	...
27	3.9	4.0	4.5	4.3	4.1	4.3	3.0	5.1	8.0	9.7	9.5	9.8	9.0	9.0	9.1	9.5	9.1	9.0	7.4	4.8	5.1	2.8	3.0	3.2	6.3
28	3.5	3.8	3.8	3.9	4.1	3.5	2.8	5.8	7.5	8.4	9.1	9.2	8.8	9.6	9.3	9.3	9.5	9.2	6.5	5.6	5.5	4.0	3.8	3.5	6.2
29	3.5	3.8	4.0	4.0	4.2	3.9	3.3	5.7	7.8	8.4	8.6	9.6	10.2	9.3	8.8	9.6	10.2	9.2	7.0	5.7	5.4	4.4	4.5	4.5	6.5
30	4.2	4.1	4.4	4.5	4.5	3.8	3.1	5.5	8.0	9.2	9.8	10.6	10.0	10.2	10.4	10.3	10.5	10.8	10.0	7.1	6.2	5.0	5.0	5.3	7.2
31	4.6	4.4	5.0	4.2	4.7	4.0	3.4	5.5	8.2	9.6	9.8	10.2	10.4	11.1	10.8	10.6	10.4	9.0	7.3	6.4	5.2	3.9	3.5	3.5	6.9
MEAN*	3.6	3.6	3.6	3.6	3.6	3.3	3.0	5.0	7.7	8.8	9.6	9.7	9.8	9.7	9.7	9.9	9.9	9.1	7.5	5.6	4.5	3.7	3.6	3.6	6.3

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 8

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1938 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JULY 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	265	270	290	275	270	255	255	235	230	225	240	270	275	295	290	300	240	210	230	260	300	290	280	290	264
2	230	...a	...a	...a	...a	...a	280	250	225	245	245	255	235	245	...a	245	255	230	215	230	240	255	320	290	...
3	280	260	260	270	275	260	240	235	225	240	235	255	240	250	220	235	255	230	230	260	245	255	285	285	251
4	280	280	270	280	270	260	265	240	235	230	225	240	270	250	225	255	260	225	220	240	250	305	p310c	p310c	p258
5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	235	235	260	305	260	240	240	220	230	260	280	275	280	250	...
6	255	300	300	290	295	280	265	245	235	240	240	220	245	p240a	p240a	235	250	240	225	230	220	300	p300	305	p258
7	290	275	265	260	250	305	325	260	235	240	235	230	225	280	240	250	250	230	230	240	255	270	280	330	260
8	285	305	300	295	...c	...c	290	250	220	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	255	260	260	275	...c	220	230	220	255	280	280	255	...	...
10	305	300	280	p280	280	280	265	240	230	235	245	255	300	275	300	250	240	230	220	240	245	290	290	300	266
11	280	275	255	260	355	325	300	p250c	245	240	255	235	p245c	255	p250c	p250c	245	225	225	245	235	275	255	285	p261
12	285	280	275	285	240	250	270	265	240	225	255	255	280	290	270	235	240	230	215	255	270	290	270	295	261
13	280	295	285	260	250	255	245	250	240	255	255	250	265	260	230	250	245	225	235	240	230	p260	295	280	p256
14	295	290	285	275	260	240	300	240	235	255	240	260	265	285	260	265	240	255	240	255	255	280	280	280	264
15	255	260	280	285	295	285	270	255	245	240	235	245	280	250	280	265	245	240	235	265	280	300	325	330	269
16	350	350	330	330	330	290	305	255	250	p245c	p245c	p250c	260c	260	270	260	260	235	235	245	250	320	270	290	p278
17	350	...c	...c	...c	...c	...c	...c	240	220	230	250	...c	260	255	300	280	270	255	225	225	230	275	270	265	...
18	350	315	270	280	285	270	290	330	255	265	285	275	255	240	260	260	235	230	230	235	230	290	295	320	273
19	305	295	295	270	265	275	285	265	225	230	260	265	260	260	265	255	240	245	230	260	260	300	315	250	266
20	230	250	280	300	270	255	205	240	230	265	270	275	280	245	275	255	235	230	210	250	235	230	275	270	252
21	260	275	255	250	250	270	260	250	245	240	250	265	p275c	280	p280c	250	240	240	230	240	230	255	260	250	p254
22	250	230	250	240	230	280	245	240	250	245	270	285	300	255	290	275	270	225	235	250	215	265	250	235	253
23	300	310	280	280	280	260	240	245	235	235	255	260	p260c	255	235	230	245	235	200	205	235	260	260	260	p252
24	p285c	p285c	290	280	250	255	275	235	230	255	240	250	255	p250c	p250c	p250c	225	255	p255c	260	225	210	270	265	p254
25	250	265	270	285	2250	270	240	235	240	230	235	230	280	260	230	235	260	230	240	230	240	275	290	275	252
26	290	285	290	285	280	270	280	235	235	250	p255c	p265c	275	285	285	240	255	245	220	205	265	250	260	270	p261
27	270	270	270	270	265	235	250	240	230	250	245	270	250	275	280	250	240	240	215	260	240	2265	280	295	256
28	285	275	270	270	270	225	235	235	230	240	240	230	260	320	260	295	250	250	210	255	240	230	260	260	254
29	280	280	275	280	275	220	240	235	230	240	235	285	270	250	340	275	260	235	210	255	235	265	275	280	259
30	270	265	270	255	245	220	240	250	240	250	230	290	280	295	290	280	290	245	225	210	240	290	275	280	259
31	p290c	315	280	260	235	p230c	p230c	220	240	240	255	255	p270c	285	335	265	255	235	205	260	245	220	255	250	p255
MEAN*	282	283	279	276	270	264	265	247	235	241	247	255	265	269	271	257	248	235	224	224	247	271	278	280	260

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 9

JULY 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1938

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	4.3	4.8	4.6	4.3	4.4	...	...	...
2	...	...	...	...	...	4.4	...	...	...	...	...	...	...
3	...	...	...	4.2	3.9	...	...	...	...	...	...	...	...
4	...	...	...	...	...	4.8	5.3	4.9	5.3	5.1	5.1	...	...
5	...	...	...	...c	5.1	5.2	4.9	5.0	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	5.1	5.2	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	5.0	5.1	5.0	...c	...c	...	...	...
10	...	...	...	...	...	5.0	5.4	5.1	5.2	...	...	...	...
11	...	...	...	...	...	4.9	4.9	5.5	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	4.1	4.3	4.5	5.0	4.9	...	...	...	...	...
14	...	...	...	...	...	4.5	4.8	5.0	5.1	4.8	...	...	...
15	...	...	...	4.0	...	4.5	5.5	...	5.0	4.2	...	...	...
16	...	...	...	...c	...c	...c	5.1	5.0	...	5.0	5.0	...	...
17	...	...	...	...	4.9	...c	5.0	5.0	5.2	5.0	5.0	4.0	...
18	...	...	...	5.0	5.0	...	5.0	5.0	4.1	4.6	...	...	...
19	...	...	...	...	5.1	4.9	5.2	4.9	5.0	...	...	...	...
20	...	...	...	5.0	5.0	5.0	5.2	5.0	5.2	4.3	...	...	...
21	...	...	...	...	...	5.0	...c	5.1	...c	4.4	...	...	...
22	...	...	...	...	4.4	5.2	5.3	...	5.2	4.1	...a	...	...
23	...	...	...	...	4.9	5.2	...e	4.2	...	...	...	...	...
24	...	...	...	...	...	...c	4.5	...c	...a	...a	...	...	...
25	...	...	...	...	...	...	5.0	5.0	...	...	...	...	...
26	...	...	...	...	...	...	5.0	4.9	5.1	...	...	...	...
27	...	...	...	...	4.9	5.3	5.2	5.4	5.0	5.3	...	...	...
28	...	...	...	...	...	...	4.9	5.2	4.6	5.0	...	...	...
29	...	...	...	...	...	4.8	4.9	5.0	5.5	5.2	...	...	...
30	...	...	...	4.7	...	5.0	5.2	5.3	5.4	4.8	...a	...	...
31	...	...	...	...	4.5	4.8	...a	...a	6.5	...a	...	...	...
MEAN*	...	...	...	4.5	4.7	4.9	5.0	5.0	5.1	4.7	5.0	4.0	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	230	245	235	215	250	...	...	...
2	...	...	...	...	...	220	...	...	...	...	...	...	...
3	...	...	...	215	195	...	...	...	...	...	...	...	...
4	...	...	...	...	...	210	215	235	200	245	230	...	...
5	...	...	...	...c	230	215	240	230	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	205	235	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	225	225	230	...c	...c	...	...	...
10	...	...	...	...	...	220	205	240	230	...	...	...	...
11	...	...	...	...	...	230	230	230	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	230	220	215	250	240	...	...	...	...	...
14	...	...	...	...	...	245	240	255	240	230	...	...	...
15	...	...	...	240	...	215	230	...	225	230	...	...	...
16	...	...	...	...c	...c	...c	225	240	...	245	250	...	...
17	...	...	...	...	225	...c	230	230	225	265	235	235	...
18	...	...	...	225	230	...	250	220	200	220	...	...	...
19	...	...	...	...	235	235	225	205	240	255	...	...	...
20	...	...	...	235	255	270	245	215	245	230	...	...	...
21	...	...	...	...	...	235	...c	210	...c	210	...	...	...
22	...	...	...	...	235	235	215	...	270	220	...	...	...
23	...	...	...	...	250	230	...a	230	...	...	...	...	...
24	...	...	...	...	...	...c	...	...c	...a	...a	...	...	...
25	...	...	...	...	...	...	220	235	...	...	...	...	...
26	...	...	...	...	...	...	215	215	210	...	...	...	...
27	...	...	...	...	225	230	230	240	215	240	...	...	...
28	...	...	...	...	...	...	225	225	220	220	...	...	...
29	...	...	...	...	...	225	235	225	210	225	...	...	...
30	...	...	...	210	...	220	230	245	220	240	...a	...	...
31	...	...	...	...	225	230	...a	...a	210	...a	...	...	...
MEAN*	...	...	...	226	230	228	230	229	224	235	236	235	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 10

JULY 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1938

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	...	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.8	0.7	...e
21	...	...	...	1.0	0.9	1.0	...c	0.7	...c	...e	...	0.8	...e
22	...	0.7	0.7	...	...	...	0.9	1.1	1.1	0.8	0.8	0.6	0.7
23	...	...	0.6	...e	0.7	0.9	0.9	1.0	0.9	...e	...e	...	...
24	...	...	...e	0.9	1.0	...c	0.9	...c	1.0	1.1	1.2	0.7	0.7
25	...	0.6	0.9	...e	...e	...e	0.9	0.9	0.8	0.7	0.7	0.7	0.6
26	...	...	0.7	0.6	0.8	0.9	0.8	0.6	...e	...e	1.1	...e	...e
27	...	...	...	0.6	0.6	0.8	0.9	0.8	0.8	0.7	0.7	0.7	...e
28	...	...	0.8	0.9	0.9	0.7	0.8	1.0	0.8	...e	0.8	0.7	...e
29	...	...	0.9	0.8	0.9	0.8	1.8	1.1	1.0	0.9	0.9	0.7	0.7
30	...	...	0.8	0.7	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.0	...e
31	...	...	0.8	1.2	1.0	1.0	1.7	1.1	1.0	0.9	0.7	0.7	...e
MEAN*	...	0.7	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.6	...	3.0	3.1	3.3	3.5	3.5	3.2	3.0	2.8	...	...
2	...	...	2.5	2.9	3.1	3.3	3.4	3.3	3.2	3.1	2.7	1.9	...
3	...	...	...	2.9	3.2	3.4	3.5	3.5	3.3	3.0	2.8	...	...
4	...	...	2.4	2.9	2.8	3.4	3.5	3.5	3.5	3.2	2.7	2.0	...
5	...	...c	...c	...c	3.3	3.5	3.5	3.4	3.3	3.0	...	...	...
6	...	...	2.7	3.0	3.5	3.6	3.7	...	...	3.0	2.7	...	...
7	...	...	...	3.0	3.3	3.4	3.7	...	3.4	3.3	...	...	...
8	...	...	2.7	3.0	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	3.5	3.6	3.5	...c	...c	2.9	...	...
10	...	...	2.7	3.1	3.4	3.7	3.7	3.8	3.6	...	...	...	...
11	...	...	2.7	3.0	3.4	...c	...c	...	...c	...c	2.9	...	...
12	...	...	2.7	2.9	3.4	3.5	3.6	3.8	3.5	3.4	2.8	...	...
13	...	...	2.8	3.1	3.4	3.6	3.6	3.6	3.5	3.3	2.7	...	...
14	...	...	2.7	3.3	3.3	3.5	3.6	3.3	3.4	3.3	2.8	...	...
15	...	...	2.7	3.0	3.2	3.5	3.6	3.7	3.5	3.1	2.7	...	...
16	...	...	2.7	...c	...c	...c	3.7	3.3	...	3.3	...	...	...
17	...c	...	...	2.8	3.0	...c	3.6	3.4	3.3	4.0	3.1	2.7	...
18	...	...	...	3.1	3.3	3.5	3.6	3.6	3.5	3.3	2.9	...	...
19	...	...	2.7	3.1	3.4	3.6	3.6	3.6	3.5	3.3	2.7	2.1	1.6
20	0.8	2.0	2.5	3.0	3.4	3.5	3.6	3.6	3.4	3.0	2.8	2.1	0.9
21	0.8	1.8	2.7	3.0	3.5	3.5	...c	3.2	...c	3.1	2.8	2.3	1.7
22	0.8	1.7	2.4	3.0	3.5	3.6	3.6	3.6	3.3	2.8	...a	2.1	...
23	0.9	1.8	2.5	3.0	3.3	3.5	3.7	3.6	3.5	3.3	2.8	1.9	1.3
24	0.8	1.7	2.5	2.9	3.5	3.6	3.7	...c	3.3	...a	2.9	2.2	...a
25	0.9	1.9	2.5	3.0	3.5	3.5	3.7	3.7	3.4	3.1	2.8	1.6	1.8
26	1.3	1.8	2.5	...	...	...	3.8	3.6	3.6	3.4	3.3	2.2	1.8
27	0.9	1.8	2.6	3.0	3.5	3.6	3.8	3.7	3.5	3.1	2.9	2.0	...
28	0.9	2.1	2.5	3.0	3.4	3.5	3.7	3.6	3.5	3.3	2.9	2.2	1.2
29	1.0	2.0	2.5	3.0	3.3	3.6	3.7	3.7	3.9	3.1	2.9	2.2	1.2
30	1.0	2.0	2.7	3.0	3.5	3.5	3.6	3.5	3.6	3.3	2.7	2.2	1.0
31	1.1	1.2	2.8	3.2	3.5	3.6	3.6	3.5	3.6	3.4	2.8	2.4	1.0
MEAN*	0.9	1.8	2.6	3.0	3.3	3.5	3.6	3.5	3.4	3.2	2.8	2.1	1.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F_2 EQUAL TO OR LESS THAN f^0F_1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 11

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1938 — AUGUST 1938

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.4	3.2	3.5	3.2	3.0	2.4	2.6	5.2	8.1	9.3	10.0	9.5	9.2	9.2	10.1	10.3	9.7	10.0	8.3	6.9	6.0	5.2	5.2	4.7	6.7
2	3.7	3.4	3.5	3.6	3.1	2.6	2.9	5.9	7.2	11.0	p11.0c	11.1	11.1	11.1	11.7	12.3	10.5	9.9	10.3	11.9	6.3	4.8	4.3	4.1	7.4
3	3.9	3.8	3.5	3.4	3.2	3.3	3.0	5.4	8.4	10.2	10.9	11.4	11.7	11.7	11.1	10.9	10.2	9.9	9.3	7.4	6.5	5.1	4.5	3.8	7.2
4	3.7	3.8	3.8	4.1	3.7	3.1	2.8	4.7	9.4	10.6	10.6	12.1	11.0	10.0	10.0	10.0	11.0	11.4	11.8	9.1	4.6	3.1	3.5	3.5	7.1
5	3.8	3.6	4.5	5.3	2.6	2.5	2.8	5.7	9.7	10.1	10.8	11.6	11.4	11.0	11.4	11.5	10.7	10.2	10.0	8.0	5.9	4.8	4.9	3.8	7.4
6	3.8	3.4	3.5	3.5	3.1	2.7	2.8	5.9	9.3	11.0	11.1	p11.0c	p11.0c	p11.0c	10.5	11.0	11.1	10.7	9.8	7.5	6.2	4.6	4.6	4.3	7.2
7	3.6	3.0	3.2	3.9	3.7	3.8	3.3	6.3	9.0	9.8	11.1	11.5	11.5	10.7	10.8	10.5	10.2	10.6	9.6	8.1	6.4	5.0	4.2	4.2	7.2
8	4.5	4.1	3.6	4.0	4.0	3.4	3.4	6.2	8.0	9.9	11.6	p11.5c	11.1	11.2	10.3	p10.2c	p10.0c	9.8	8.6	7.8	6.6	4.8	4.5	4.5	7.2
9	4.1	4.0	3.6	3.2	3.0	3.2	3.1	6.0	8.1	9.5	11.1	p11.1c	11.1	11.8	p11.6c	p11.3c	p11.0c	10.6	9.8	7.1	6.2	4.8	4.2	3.8	7.2
10	3.5	3.6	3.6	3.7	3.7	3.4	3.3	6.2	8.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	10.2	9.8	8.0	7.0	6.6	6.8	6.8	...
12	6.4	6.0	6.0	6.9	5.8	5.2	4.6	6.5	9.1	10.5	10.5	10.5	10.2	9.5	9.4	9.0	9.1	8.1	8.0	6.0	5.3	5.0	4.6	4.6	7.3
13	4.5	4.1	3.8	3.8	3.6	3.6	3.4	6.5	8.7	9.4	10.1	10.9	11.0	10.4	11.2	10.4	10.2	10.1	8.9	7.1	6.8	6.5	5.8	4.9	7.3
14	4.8	4.7	4.5	4.2	4.0	3.8	3.4	6.3	8.3	9.4	10.7	11.2	11.2	10.1	10.4	10.6	10.2	9.9	9.2	6.8	5.8	5.2	4.3	4.3	7.2
15	4.4	4.4	4.5	4.5	4.3	4.5	4.0	6.1	7.8	9.4	10.0	10.9	10.2	10.4	10.8	9.7	10.2	9.8	8.6	7.6	6.6	5.4	5.0	4.5	7.2
16	4.4	4.0	4.2	4.2	3.7	3.7	3.7	6.4	7.7	9.8	10.9	10.0	10.0	9.5	10.0	10.1	9.9	9.2	8.4	6.3	5.7	4.8	4.2	4.0	6.9
17	4.3	3.9	4.0	3.9	3.4	3.2	3.2	6.5	8.0	9.9	10.9	10.5	10.3	10.2	10.1	10.1	9.8	8.5	8.0	6.6	6.1	5.4	4.6	4.6	6.9
18	4.4	4.3	4.1	3.8	3.1	3.0	3.3	6.1	8.4	9.8	10.1	10.4	10.0	9.7	10.4	9.8	9.1	8.8	9.0	7.5	6.6	5.4	4.3	4.2	6.9
19	4.1	4.2	4.3	4.1	3.5	3.5	3.7	6.6	.6	9.5	10.2	10.1	10.0	9.9	9.9	10.1	10.1	9.7	8.5	6.7	5.6	4.9	4.2	4.1	6.9
20	4.1	4.0	3.9	3.6	3.5	3.6	3.6	6.0	7.3	9.1	11.2	12.0	10.8	11.0	10.3	9.9	9.8	9.2	8.6	7.1	6.4	5.5	4.8	4.2	7.1
21	4.3	4.6	4.0	4.1	3.9	4.0	4.4	7.1	8.9	9.5	10.6	10.2	10.0	10.4	10.2	10.1	9.7	9.4	8.6	7.5	6.0	5.4	4.8	4.6	7.2
22	4.5	4.6	4.5	4.4	4.2	4.4	4.5	6.5	8.6	9.0	9.9	11.2	11.6	11.4	11.5	11.4	10.9	9.8	9.3	7.9	6.5	6.2	5.5	4.5	7.6
23	4.2	4.1	4.4	4.8	3.5	3.3	3.9	6.8	8.5	10.3	11.2	11.2	10.5	11.7	12.1	12.3	11.7	10.3	9.8	8.0	7.7	8.5	8.1	7.3	8.1
24	6.8	5.8	6.0	6.0	5.4	4.6	4.7	7.2	9.2	10.7	11.3	11.0	11.6	11.5	11.2	10.5	10.6	9.8	8.6	7.5	6.8	6.3	5.7	5.7	8.1
25	5.5	5.3	4.7	4.4	4.2	4.0	4.0	6.6	8.3	10.6	11.1	11.5	10.8	10.9	10.8	10.5	10.3	9.9	9.3	8.5	7.2	6.3	5.5	5.1	7.7
26	5.1	4.9	4.8	4.7	4.6	4.6	4.8	7.5	9.1	10.2	11.1	11.3	11.1	11.1	10.3	10.4	9.9	9.7	9.3	8.5	7.0	6.4	5.5	4.9	7.8
27	4.7	4.7	4.7	4.8	4.6	4.4	4.5	7.2	8.5	10.5	11.8	11.0	10.7	11.0	10.7	10.5	10.3	10.2	9.4	8.1	8.0	6.7	5.4	4.9	7.8
28	4.8	4.7	4.8	4.8	4.5	4.3	4.5	7.4	9.8	10.7	11.3	10.7	10.7	10.7	11.0	10.6	10.5	10.2	9.3	7.7	7.0	6.1	5.0	4.9	7.8
29	4.9	4.9	5.0	4.7	4.1	3.6	4.0	6.8	8.4	10.0	10.1	10.6	11.1	11.1	10.9	10.2	10.1	9.9	9.4	8.8	7.3	6.2	5.3	4.9	7.6
30	4.9	5.0	5.1	4.8	4.4	4.4	4.6	7.8	8.9	9.8	11.0	11.6	11.1	11.4	11.6	11.6	10.7	9.8	8.9	8.9	7.8	7.3	6.6	6.4	8.1
31	5.8	5.6	5.4	5.0	5.1	5.2	5.8	9.2	10.3	10.9	10.2	10.6	11.2	11.0	11.1	11.0	10.6	10.1	9.7	8.0	6.7	6.5	6.0	5.6	8.2
MEAN*	4.6	4.3	4.3	4.3	3.9	3.7	3.8	6.5	8.6	10.0	10.8	11.0	10.8	10.7	10.7	10.6	10.3	9.9	9.2	7.8	6.5	5.6	5.1	4.7	7.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 12

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1938 AUGUST 1938

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	265	260	255	250	225	250	235	210	225	240	270	250	280	265	310	270	240	245	215	210	260	255	265	250	250
2	250	p275a	290	265	220	200	260	260	235	255	p270c	280	300	310	240	265	250	245	235	215	210	225	255	245	252
3	260	255	250	235	p245a	265	270	260	235	245	220	240	220	230	220	240	235	235	230	225	220	245	240	260	241
4	265	260	270	250	245	210	235	280	240	240	230	250	240	240	245	p240a	p235a	p225a	215	200	195	250	350	315	247
5	p265a	p255a	p250a	225	215	p235a	270	265	250	230	225	240	210	215	215	245	p250a	270	230	215	235	245	250	280	241
6	270	265	250	250	225	225	290	245	245	240	235	p235c	p235c	p235c	225	250	235	240	220	220	225	260	260	240	242
7	245	270	270	280	265	240	270	240	240	230	240	270	265	250	245	245	240	250	230	230	220	225	245	250	248
8	260	250	255	275	225	250	250	240	240	230	245	p240c	230	240	330	p300c	p275c	245	215	220	240	225	250	245	249
9	260	250	245	250	250	270	240	235	235	225	260	p260c	265	270	p270c	p260c	p250c	245	220	230	230	250	240	265	249
10	265	275	275	250	260	250	250	225	230	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	260	250	220	260	290	295	285	...
12	255	295	300	260	245	270	290	280	290	275	275	275	275	275	235	235	240	240	235	215	245	250	265	260	262
13	250	250	270	280	245	265	240	245	225	230	250	270	250	270	265	230	230	240	215	230	265	250	250	245	248
14	265	265	250	250	245	240	220	225	230	235	250	260	280	280	305	275	240	235	225	210	245	230	260	270	250
15	275	270	270	260	235	245	220	235	225	240	250	295	265	305	300	230	225	225	230	225	245	235	245	235	249
16	250	240	260	245	245	270	245	230	225	260	250	260	285	265	275	235	235	235	225	215	240	230	250	250	247
17	255	235	245	225	225	235	260	235	230	260	270	270	260	295	285	235	240	225	220	215	245	260	225	260	246
18	260	250	240	230	195	260	260	245	240	260	260	270	270	255	270	260	230	245	240	220	225	225	245	270	247
19	305	280	245	230	250	250	270	245	235	250	265	265	290	260	250	260	220	230	220	215	240	245	250	250	251
20	235	240	260	270	245	260	240	240	230	240	290	250	270	270	260	260	230	230	225	230	240	240	230	255	247
21	250	235	245	250	235	270	260	240	240	245	265	260	250	275	270	265	225	240	225	220	240	240	240	260	248
22	245	260	270	260	250	275	225	220	245	255	270	310	275	270	270	275	230	230	210	225	230	245	225	245	251
23	280	300	300	250	235	255	280	245	225	270	265	270	275	300	275	250	225	225	230	240	290	250	235	245	259
24	235	255	245	240	215	240	250	235	240	260	260	250	270	270	270	250	225	230	230	220	235	240	250	245	244
25	245	245	225	240	220	265	260	240	240	270	270	270	285	265	280	250	225	245	235	225	240	240	235	260	249
26	250	250	260	245	250	245	260	240	235	255	280	270	255	260	245	290	250	240	230	225	220	230	235	245	249
27	260	250	275	250	240	260	250	220	215	265	270	250	260	300	270	270	235	245	225	220	240	225	240	255	250
28	270	270	260	245	250	250	260	240	245	255	260	280	275	270	310	245	215	245	235	225	230	240	235	260	253
29	270	275	260	225	220	250	265	235	240	260	275	280	280	290	290	235	225	245	245	225	220	225	240	270	252
30	275	270	260	240	245	300	275	235	245	245	275	280	290	280	280	265	230	235	245	250	230	235	230	250	257
31	245	245	250	240	260	295	280	240	240	255	240	265	280	275	290	275	240	245	230	220	225	245	240	255	253
MEAN*	259	259	259	249	237	253	256	242	237	249	258	264	265	268	269	255	235	239	227	222	235	240	248	256	249

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 13

AUGUST 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1938

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.6	4.8	5.3	4.8	...a	4.5	...	...	...
2	...	...	...	...	...	5.1	5.3	5.4	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	4.8	4.9	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	5.2	...	...	...	...
9	...	...	...	...	5.0	...c	5.3	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	3.8	4.5	5.0	4.8	5.0	5.0	...	...	...	...	...
13	...	...	...	3.7	4.9	5.0	4.8	5.1	4.8	...	...	...	...
14	...	...	...	...	4.6	5.0	4.9	5.1	5.4	4.9	...	...	...
15	...	...	...	...	5.0	5.3	5.4	5.3	5.1	...	...	...	...
16	...	...	...	4.8	4.9	5.0	5.0	5.0	4.8	...	...	...	...
17	...	...	...	4.5	5.0	5.1	5.1	5.5	4.9	...	...	...	...
18	...	...	...	4.6	5.0	5.2	5.1	5.0	4.8	4.5	...	...	...
19	...	...	...	4.6	5.2	5.1	4.9	5.1	...	4.5	...	...	...
20	...	...	...	...	5.3	5.3	5.2	4.9	4.6	5.2	...	...	...
21	...	...	4.0	4.4	5.1	4.9	4.8	5.2	5.2	4.5	...	...	...
22	...	...	...	4.7	5.2	5.5	5.1	5.0	5.1	4.8	...	...	...
23	...	...	...	5.2	5.0	5.0	5.3	5.4	5.1	4.7	...	...	...
24	...	...	...	5.0	5.1	5.1	5.1	5.0	4.9	4.5	...	...	...
25	...	...	...	4.8	5.0	5.2	5.4	5.2	4.9	4.4	...	...	...
26	...	...	...	4.9	5.1	5.2	5.1	4.9	4.7	5.3	...	...	...
27	...	...	...	4.9	5.1	5.3	5.1	5.5	5.1	5.4	...	...	...
28	...	...	4.1	4.7	5.1	5.1	5.1	5.3	5.5	...	...	...	...
29	...	...	...	4.8	5.1	5.3	5.3	5.3	5.0	...	...	...	...
30	...	...	4.1	4.3	5.1	5.4	5.4	5.2	5.1	4.8	...	...	...
31	...	...	...	4.9	4.9	5.0	5.1	5.1	5.4	4.9	...	...	...
* MEAN	...	...	4.0	4.7	5.0	5.1	5.1	5.1	5.0	4.8	...	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	230	225	215	220	...a	220	...	...	...
2	...	...	...	...	...	230	215	240	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	230	220	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	215	...	...	...	...
9	...	...	...	...	225	...c	215	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	350	245	230	210	230	230	...	...	...	...	...
13	...	...	...	210	200	180	210	210	230	...	...	...	...
14	...	...	...	...	225	225	210	205	220	230	...	...	...
15	...	...	...	...	235	220	240	235	230	...	...	...	...
16	...	...	...	240	235	225	220	220	200	...	...	...	...
17	...	...	...	230	225	220	210	200	220	...	...	...	...
18	...	...	...	225	225	220	225	220	230	215	...	...	...
19	...	...	...	235	200	240	200	230	...	225	...	...	...
20	...	...	...	...	230	230	215	200	210	200	...	...	...
21	...	...	235	225	210	200	200	190	225	220	...	...	...
22	...	...	...	215	210	195	215	240	230	225	...	...	...
23	...	...	...	210	230	215	230	220	210	230	...	...	...
24	...	...	...	240	235	220	205	220	225	220	...	...	...
25	...	...	...	245	230	220	220	235	230	225	...	...	...
26	...	...	...	240	235	225	225	215	215	215	...	...	...
27	...	...	...	235	225	230	210	200	220	220	...	...	...
28	...	...	240	240	220	215	210	210	200	...	...	...	...
29	...	...	...	245	230	220	235	215	220	...	...	...	...
30	...	...	225	210	220	230	220	220	230	220	...	...	...
31	...	...	...	225	220	205	200	220	220	220	...	...	...
* MEAN	...	...	262	230	224	219	216	218	220	220	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 14

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1938

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.7	0.7	0.7	...c
2	...	...e	0.8	0.9	p1.0c	1.0	1.9	1.2	1.0	0.9	0.8	0.8	...c
3	...	0.5	0.5	2.0	1.0	1.2	0.8	1.0	1.0	0.8	0.8	0.7	0.6
4	...	...e	0.9	0.7	0.9	0.9	1.0	0.9	0.8	0.9	0.8	0.6	...c
5	...	...e	0.7	0.8	0.8	0.8	1.0	1.1	1.1	1.0	0.8	0.6	...c
6	...	0.5	0.7	0.5	0.9	...c	...c	...c	0.9	0.8	0.8	0.7	...c
7	...	0.6	0.8	0.8	1.0	0.9	0.8	0.9	1.0	0.8	0.8	...e	...c
8	...	0.7	0.9	1.0	1.2	...c	...c	1.1	1.1	...c	...c	...c	0.6
9	...	0.7	1.0	1.1	1.1	p1.1c	1.0	1.0	...c	...c	...c	...e	...e
10	...	...e	...e	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...e	...c
12	...	...e	...e	0.8	0.9	1.0	1.1	1.0	1.3	0.9	0.8	...e	...e
13	...	...e	0.7	0.9	1.0	0.9	1.1	0.8	0.9	0.7	...e	...e	0.7
14	...	...e	0.7	0.8	1.0	0.9	1.0	0.9	0.8	0.7	0.8	0.6	0.5
15	...	0.6	0.7	0.7	0.8	0.8	0.8	1.0	0.8	0.7	0.7	0.7	...e
16	...	0.6	1.0	0.8	0.7	9.5	0.9	0.8	0.8	0.7	0.7	...e	...e
17	...	...e	0.7	0.8	1.0	1.1	1.2	1.1	0.9	0.8	0.9	0.7	0.6
18	...	0.6	0.8	0.9	0.8	1.1	1.1	1.1	1.1	1.1	1.0	0.7	...e
19	...	0.6	0.8	1.0	0.9	1.1	1.0	0.9	0.8	0.8	0.7	0.7	5.5
20	...	0.6	0.7	0.9	0.9	0.9	1.0	1.0	1.0	1.0	0.7	0.7	0.5
21	...	0.6	0.8	0.9	1.0	1.0	0.8	0.8	0.7	0.7	0.5	0.7	0.6
22	...	0.5	0.9	0.7	0.7	0.7	0.8	1.1	0.9	0.8	0.7	0.6	0.5
23	...	0.5	0.6	0.9	1.1	1.2	1.0	1.0	1.0	1.0	0.9	0.7	0.6
24	...	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.7	0.7	0.7	0.6
25	...	0.5	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.5	0.5	0.7	0.6
26	...	0.5	0.6	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.5
27	...	0.7	0.6	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.7	0.7	0.5
28	...	0.6	0.8	0.7	0.7	0.8	0.7	0.8	0.9	0.8	0.8	0.7	0.6
29	...	0.6	0.7	0.7	0.9	1.0	0.8	0.8	0.8	1.0	0.9	0.8	0.7
30	...	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.9	1.0	0.8	0.7	0.6
31	...	0.7	0.7	0.8	0.8	0.8	0.8	0.9	1.0	0.8	0.8	0.7	0.6
MEAN*	...	0.6	0.8	0.9	1.0	0.9	1.0	1.0	1.0	0.8	0.8	0.7	0.5

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.6	2.1	2.7	3.1	3.5	3.7	3.5	3.4	...a	3.2	3.0	2.3	p1.2
2	0.8	1.8	2.4	3.2	p3.5c	3.7	3.7	3.6	3.5	..a	3.1	2.4	1.0
3	0.8	2.0	2.8	3.5	3.5	3.6	3.7	3.7	3.4	3.2	2.9	2.3	1.2
4	1.0	2.0	2.5	3.1	3.5	3.7	3.7	3.7	3.6	3.0	2.6	p2.3a	1.2
5	0.8	2.1	2.5	3.1	3.5	3.6	3.7	3.7	3.5	3.5	p3.0a	2.1	p1.2a
6	0.7	2.0	2.5	3.1	3.5	p3.7c	p3.7c	p3.6c	3.5	3.5	3.0	2.4	1.2
7	0.8	2.0	2.7	3.2	3.7	3.8	3.8	3.7	3.6	3.0	2.9	2.4	1.8
8	0.7	2.0	2.7	3.1	3.5	p3.7c	3.9	3.8	3.5	p3.3c	p3.0c	p2.3c	1.0
9	0.8	2.0	2.6	3.1	3.4	p3.7c	3.8	3.8	p3.5c	p3.3c	p3.0c	2.3	2.3
10	0.8	2.0	2.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.1	1.2
12	0.8	1.9	2.6	3.2	3.4	3.7	3.6	3.6	3.5	3.1	2.9	2.0	1.2
13	0.8	2.1	2.6	3.2	3.5	3.6	3.6	3.6	3.5	3.1	3.0	2.3	1.7
14	0.8	2.1	2.8	3.1	3.5	3.7	3.8	3.6	3.4	3.3	3.0	2.3	1.2
15	0.6	2.0	2.7	3.2	3.5	3.7	3.7	3.7	3.6	3.3	3.0	2.2	1.2
16	0.8	2.1	2.8	3.2	3.4	3.6	3.7	3.6	3.5	3.3	3.0	2.2	1.1
17	0.8	2.1	2.7	3.2	3.6	3.7	3.8	3.6	3.4	3.4	3.0	2.3	1.8
18	0.8	2.1	2.8	3.1	3.5	3.6	3.7	3.7	3.5	3.3	3.0	2.2	1.1
19	0.8	2.1	2.7	3.2	3.5	3.6	3.7	3.6	3.5	3.2	2.8	2.3	1.3
20	0.6	2.0	2.6	3.3	3.5	3.8	3.7	3.7	3.6	3.3	2.9	2.4	1.4
21	0.8	2.1	2.8	3.2	3.4	3.6	3.7	3.6	3.6	3.4	3.0	2.4	1.1
22	0.7	2.1	2.7	3.1	3.4	3.6	3.6	3.7	3.7	3.4	3.0	2.3	1.2
23	0.9	2.2	2.7	3.1	3.6	3.7	3.8	3.6	3.5	3.3	2.9	2.3	1.2
24	1.0	2.3	2.7	3.2	3.5	3.6	3.7	3.7	3.6	3.4	3.0	2.3	1.8
25	1.0	2.4	3.0	3.2	3.5	3.6	3.7	3.7	3.6	3.4	3.0	2.2	1.4
26	1.0	2.2	2.7	3.2	3.5	3.7	3.7	3.7	3.6	3.4	3.0	2.3	1.4
27	0.8	2.2	2.8	3.2	3.5	3.7	3.8	3.8	3.7	3.4	3.0	2.4	1.4
28	1.0	2.4	3.0	3.3	3.5	3.6	3.8	3.7	3.6	3.4	3.1	2.4	1.4
29	0.9	2.3	2.9	3.3	3.6	3.7	3.8	3.7	3.7	3.5	3.0	2.6	1.4
30	1.0	2.2	2.9	3.3	3.5	3.6	3.7	3.7	3.3	3.4	3.1	2.5	1.7
31	1.1	2.2	2.8	3.3	3.6	3.7	3.8	3.8	3.7	3.5	3.1	2.3	1.1
MEAN*	0.8	2.1	2.7	3.1	3.5	3.7	3.7	3.7	3.5	3.3	3.0	2.3	1.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 15

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1938 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — SEPTEMBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.4	5.2	5.0	4.5	4.2	4.3	4.7	8.1	10.0	11.0	11.7	11.3	11.4	11.2	11.0	10.7	10.3	10.0	10.0	8.9	7.6	7.1	6.2	6.1	8.2
2	5.4	5.5	5.3	4.8	4.6	4.6	5.0	7.9	10.1	11.0	11.2	11.6	11.2	11.4	11.2	11.0	10.6	10.7	10.5	9.7	8.2	7.3	6.6	6.2	8.4
3	6.1	6.1	5.8	5.0	4.6	4.4	4.7	8.4	10.1	11.3	11.4	11.9	11.5	11.5	11.7	11.0	11.0	11.1	10.7	9.0	7.7	7.3	7.0	7.0	8.6
4	6.6	6.5	6.3	4.3	4.5	4.5	4.9	8.5	10.2	11.1	12.0	12.3	12.2	11.3	11.3	11.1	11.0	10.7	10.4	9.6	7.6	6.9	6.2	5.8	8.7
5	5.6	5.2	4.9	4.5	4.9	4.2	5.5	7.6	p9.8c	11.3	11.6	p12.0c	12.9	12.2	11.9	11.1	11.3	11.5	10.8	9.5	8.2	7.8	6.9	6.6	8.7
6	5.9	5.6	5.5	5.4	4.9	4.2	4.9	8.2	10.5	11.5	11.9	11.8	11.6	11.2	10.8	10.7	10.7	10.7	10.4	10.3	8.7	7.9	6.7	6.2	8.6
7	5.8	5.4	4.6	4.6	4.5	4.4	5.2	8.3	10.6	11.3	11.2	11.4	12.1	11.3	10.7	10.6	10.9	11.3	11.0	9.7	9.0	8.2	7.3	6.0	8.5
8	5.0	5.1	5.1	5.0	4.9	4.9	5.0	8.3	11.0	11.8	11.5	11.3	12.0	11.7	11.6	11.4	11.0	10.6	10.4	9.6	8.4	7.9	7.0	5.9	8.6
9	5.5	5.3	5.4	4.8	4.7	4.5	5.1	8.2	10.2	10.3	11.0	12.1	12.1	11.3	11.5	11.3	11.0	11.2	10.7	9.7	p8.5c	p7.8c	6.9	6.4	8.6
10	6.2	6.0	5.5	5.3	5.3	5.3	5.8	8.2	10.1	10.8	11.1	11.9	11.8	11.9	12.0	11.6	11.5	10.9	11.0	9.3	8.1	7.0	6.6	6.7	8.8
11	6.3	6.1	5.6	5.2	4.6	4.2	5.2	7.9	9.9	11.0	11.4	11.3	12.1	11.7	11.5	11.3	10.6	10.7	10.5	9.3	8.0	7.0	6.4	6.4	8.5
12	6.3	6.3	5.1	4.5	4.3	4.4	5.1	8.3	9.6	10.5	10.5	...c	...c	...c	10.5	...c	10.8	10.6	10.6	9.0	7.6	7.0	6.5	6.0	...
13	5.7	5.6	5.2	4.3	4.4	3.5	4.1	7.0	9.0	10.2	...c	...c	10.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.8	...
14	5.3	5.0	4.7	4.3	3.3	2.9	4.1	7.0	8.4	8.7	8.8	11.1	10.7	10.7	11.3	11.9	11.3	10.2	9.8	8.4	7.2	6.8	6.6	5.5	7.7
15	3.8	4.0	4.3	4.2	3.3	3.2	3.6	5.5	5.3	6.8	7.6	9.2	9.7	11.5	11.5	10.7	10.0	8.0	7.0	7.1	6.6	5.4	5.0	4.7	6.6
16	6.0	5.7	p5.4a	4.8	5.4	4.8	5.5	8.4	10.6	8.8	10.4	8.8	10.2	10.2	9.3	8.5	8.3	8.0	7.6	7.8	7.6	6.8	6.0	5.3	7.5
17	4.6	4.4	4.0	3.1	2.3	2.3	3.4	6.2	7.7	7.6	8.4	9.3	11.1	11.1	10.8	10.4	9.7	9.1	9.2	8.4	6.3	5.5	4.7	4.6	6.8
18	4.5	4.3	4.4	3.9	3.1	2.6	3.8	6.3	8.0	8.4	8.6	8.9	9.8	9.7	9.5	9.0	8.8	8.5	8.2	7.0	6.2	6.0	5.5	4.4	6.6
19	4.3	4.4	4.3	4.2	3.5	3.2	4.3	7.0	8.6	9.0	9.2	9.7	9.5	9.9	10.0	9.7	9.2	9.4	8.9	8.2	6.9	6.4	5.7	5.2	7.1
20	4.6	4.4	4.7	4.2	3.7	3.6	4.6	7.5	9.0	10.0	9.7	10.0	10.9	11.0	10.3	9.9	9.9	9.5	9.3	8.3	7.3	6.7	5.8	5.5	7.5
21	5.2	4.9	4.8	4.5	4.2	3.8	5.2	7.8	9.5	9.9	10.7	9.8	10.2	10.4	10.3	10.6	10.3	9.5	9.0	8.6	7.3	7.3	6.6	6.0	7.8
22	5.8	5.8	5.5	4.7	4.3	4.3	5.6	7.9	9.4	10.3	9.6	11.0	11.3	10.9	10.9	10.6	10.7	10.7	10.6	9.1	7.9	7.8	6.8	6.0	8.2
23	5.9	5.3	5.0	4.9	5.0	4.9	6.3	8.6	9.9	10.8	11.2	11.5	11.9	11.9	11.2	10.8	11.1	11.4	10.7	10.0	8.7	8.1	7.3	7.0	8.7
24	6.9	6.4	5.7	5.3	4.7	4.7	6.0	8.3	10.5	11.4	11.8	11.6	11.7	11.5	11.2	10.6	10.4	10.2	10.0	8.7	8.2	7.5	7.3	6.9	8.6
25	6.8	6.5	6.1	5.7	5.5	5.5	7.0	9.3	10.6	10.9	11.3	11.5	11.5	11.4	10.9	11.0	10.7	10.5	10.3	9.3	8.4	7.8	7.0	6.7	8.8
26	6.4	6.3	6.3	5.6	5.4	5.5	6.6	8.7	9.6	10.4	10.9	11.9	12.0	11.9	12.0	11.9	11.1	10.2	10.4	9.0	9.1	9.2	8.9	8.1	9.1
27	8.2	7.3	6.8	6.3	6.3	6.0	5.8	6.6	7.0	7.7	8.9	10.4	10.1	10.5	10.5	9.9	9.4	9.0	8.8	8.5	7.9	7.4	6.7	5.7	8.0
28	5.5	5.3	5.3	5.2	4.7	4.8	6.3	7.0	7.2	7.6	7.6	7.8	8.8	9.0	8.1	7.9	6.8	6.9	6.8	6.7	6.5	5.7	5.1	4.8	6.6
29	4.6	4.2	4.0	3.7	3.6	3.6	6.1	8.4	8.9	10.3	10.5	10.7	10.7	10.6	10.3	10.0	10.7	10.8	10.3	9.6	8.4	7.3	6.5	6.4	7.9
30	6.4	6.0	6.1	5.5	5.3	5.0	5.7	7.5	8.7	9.5	10.1	10.5	10.6	10.2	10.4	10.4	10.2	10.1	9.8	8.4	7.6	7.2	7.0	6.7	8.1
31																									
MEAN*	5.7	5.5	5.2	4.8	4.5	4.3	5.2	7.8	9.3	10.0	10.4	10.8	11.1	11.1	10.8	10.6	10.3	10.1	9.8	8.8	7.8	7.2	6.5	6.0	8.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 16

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1938 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS SEPTEMBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED — 120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	245	250	245	230	260	270	275	240	245	250	255	260	255	295	290	270	259	250	245	230	240	240	240	250	254
2	255	260	240	240	260	270	255	240	240	250	260	260	255	300	260	230	225	250	230	225	230	235	230	250	248
3	260	255	250	250	265	275	290	240	235	250	265	280	250	280	285	230	230	245	225	225	235	245	275	250	254
4	250	250	240	220	260	280	250	245	235	250	260	280	275	280	220	225	235	250	245	225	230	260	235	250	248
5	270	275	270	280	260	265	260	245	235	220	215	...c	290	260	260	255	245	250	230	220	230	245	230	250	...
6	260	280	260	250	225	260	280	250	230	210	210	220	230	270	290	280	280	250	230	220	240	225	230	220	246
7	250	230	240	250	270	275	280	260	240	260	240	250	290	300	320	310	290	300	240	225	250	220	235	220	260
8	270	285	260	260	275	260	270	260	265	255	260	270	290	280	250	230	250	240	225	220	255	255	230	255	257
9	280	290	260	250	260	250	255	235	250	240	240	300	280	265	270	270	265	270	265	260	p265c	p265c	270	270	264
10	270	285	290	275	295	300	260	250	260	275	280	285	270	275	285	275	275	260	265	265	270	270	280	275	275
11	290	265	260	260	250	240	255	265	260	260	275	250	285	275	270	265	270	265	265	265	240	265	260	270	264
12	260	245	250	250	270	295	270	260	265	265	265	...c	275	...c	260	...c	280	270	245	250	245	260	255	265	...
13	250	265	260	260	260	290	275	260	260	275	...c	...c	275	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	250	...
14	250	265	265	250	265	275	260	260	260	270	270	325	290	330	300	290	270	250	270	245	300	290	250	260	273
15	300	300	300	315	300	275	300	265	270	350	325	320	335	320	285	280	270	260	245	270	265	300	285	320	294
16	...a	...a	240	...a	265	260	280	250	260	270	270	270	295	265	250	245	245	235	245	240	230	240	230	230	...
17	250	250	250	220	315	315	275	270	265	295	275	290	290	275	245	260	240	235	230	220	225	250	255	275	261
18	280	285	255	245	230	260	265	250	265	275	290	295	300	285	275	260	250	240	235	220	245	260	250	255	261
19	290	275	270	250	235	265	260	255	260	260	280	280	275	280	275	265	250	250	225	215	225	230	245	245	257
20	260	280	265	240	265	280	270	250	235	270	270	280	285	280	275	230	...	250	235	240	230	240	245	250	...
21	255	260	250	245	245	270	265	250	265	260	265	265	290	275	275	270	235	240	235	225	240	255	240	245	255
22	255	240	240	205	275	275	250	230	240	240	275	280	300	270	285	275	245	245	230	220	235	260	230	245	252
23	240	240	245	255	270	260	255	240	235	275	270	290	290	280	265	p265a	240	240	225	210	220	255	220	270	252
24	255	250	245	240	250	285	265	250	240	260	275	275	275	275	275	230	235	245	230	230	240	240	260	265	254
25	265	250	245	250	270	280	260	250	255	275	275	285	280	285	300	240	245	245	245	240	235	245	260	250	260
26	270	275	260	240	260	275	250	245	265	...a	270	305	275	270	295	270	250	250	250	280	295	270	285	280	...
27	275	295	285	300	300	290	290	300	275	250	240	300	300	320	260	250	250	260	250	260	240	270	245	260	274
28	285	275	...a	275	280	280	265	245	300	300	495	580	450	395	450	375	450	310	285	270	265	260	290	280	...
29	300	310	280	310	305	300	270	260	240	260	265	230	290	270	290	280	250	250	245	235	240	250	275	280	270
30	280	295	275	265	300	285	285	290	285	250	295	295	300	300	330	320	270	250	245	230	260	295	300	325	284
31																									
MEAN*	266	268	258	254	268	275	268	254	254	263	273	290	288	288	282	266	261	254	243	237	246	255	253	260	263

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 17

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1938 SEPTEMBER 1938

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.7	5.2	5.2	5.3	5.3	5.2	4.8	4.8	...	...	...
2	...	...	...	4.8	5.0	4.8	5.2	5.1	...	...	...	...	...
3	...	...	...	4.9	5.3	5.3	5.0	5.3	5.4	...	...	...	...
4	...	...	...	5.0	5.3	5.3	5.3	5.5	...	...	...	...	...
5	...	...	...	...	...	...	4.9	5.0	4.9	4.8	...	...	...
6	...	...	...	...	...	...	4.9	5.3	5.1	5.5	5.4	...	...
7	...	...	...	4.9	6.0	4.6	5.6	4.5	4.3	4.3	3.4	3.5	...
8	...	...	4.6	4.6	4.6	4.7	5.5	5.1	4.8	...	...	...	...
9	...	...	5.2	5.2	5.1	7.0	5.3	3.1	...	4.8	3.9	...	...
10	...	...	4.5	5.3	...a	5.3	5.3	4.8	5.0	...a	...a	...a	...
11	...	...	5.1	5.0	5.2	4.8	5.2	5.2	5.2	4.0	...	...	...
12	...	...	5.0	4.8	5.2	...c	...c	...c	5.0	...c	4.7	...	...
13	...	...	...	5.1	...c	...c	5.3	...c	...c	...c	...c	...	...
14	...	...	...	...	4.5	5.5	5.2	5.4	5.6	5.1	4.3	...	...
15	...	...	...	4.7	5.3	5.0	5.3	5.2	5.0	4.5	4.2	...	...
16	...	...	3.9	4.9	4.8	5.0	5.1	5.0	4.8	4.3	3.7	...	...
17	...	...	4.5	5.0	5.0	5.4	5.1	4.9	4.8	4.6	4.0	...	...
18	...	...	4.5	5.0	5.3	5.2	5.1	5.1	4.9	4.4	3.8	2.6	...
19	...	...	4.9	4.8	5.1	5.2	4.9	4.9	5.0	4.6	4.1	...	...
20	...	...	...	5.0	5.0	5.4	5.4	5.2	5.3	...	...b	...	...
21	...	...	4.6	4.5	4.7	5.1	5.3	5.0	4.9	4.7	...	...	...
22	...	...	...	4.8	5.1	5.1	5.2	4.8	5.3	4.5	...	...	...
23	...	...	...	4.7	5.2	5.4	5.4	5.2	4.7	...	...	...	...
24	...	...	5.1	5.1	5.3	5.2	5.3	4.9	5.1	...	...	...	...
25	...	...	4.5	5.4	5.2	5.5	5.1	5.5	5.5	...	...	...	...
26	...	...	5.1	...a	5.1	6.0	5.5	5.2	5.1	4.7	...	...	...
27	...	3.9	4.2	5.2	5.2	5.2	5.4	5.6	5.0	4.5	...	...	...
28	...	...	5.1	5.3	5.8	5.6	5.5	5.6	5.5	5.5	5.3	...	...
29	...	...	...	4.8	4.8	5.5	5.5	4.9	...	6.5	...	...	...
30	...	...	5.5	5.3	5.5	6.0	5.8	5.5	5.6	5.6	...	...	...
31													
MEAN*	...	3.9	4.8	5.0	5.2	5.3	5.3	5.1	5.1	4.8	4.2	3.0	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	235	230	230	220	270	210	210	240	...	...	...
2	...	...	...	240	225	240	225	210	...	...	...	...	...
3	...	...	...	225	230	220	230	215	205	...	...	...	...
4	...	...	...	280	230	220	215	220	...	...	...	...	...
5	...	...	...	...	...	...	210	210	210	210	...	...	...
6	...	...	...	...	...	...	210	210	220	240	210	...	...
7	...	...	...	225	200	200	210	215	250	250	235	260	...
8	...	...	250	240	220	210	220	225	210	...	...	...	...
9	...	...	230	240	220	200	220	230	...a	245	235	...	...
10	...	...	250	235	230	225	210	215	210	...a	250	...a	...
11	...	...	250	245	245	220	210	220	200	205	...	...	...
12	...	...	250	240	225	...c	...c	...c	230	...c	245	...	...
13	...	...	...	235	...c	...c	200	...c	...c	...c	...c	...	...
14	...	...	...	...	250	225	250	230	260	240	235	...	...
15	...	...	...	240	215	215	210	220	225	240	250	...	...
16	...	...	230	235	210	215	200	195	215	210	225	...	...
17	...	...	240	220	200	215	210	225	215	215	220	...	...
18	...	...	230	250	220	200	245	215	230	210	215	...	...
19	...	...	245	220	210	195	200	205	225	210	220	230	...
20	...	...	...	230	210	200	200	210	215	...	...b	...	...
21	...	...	240	220	210	215	215	210	220	220	...	...	...
22	...	...	...	240	215	220	210	210	225	215	...	...	...
23	...	...	...	235	220	210	205	225	220	...	...	...	...
24	...	...	240	240	220	220	230	215	220	...	...	...	...
25	...	...	240	220	210	200	200	205	215	...	...	...	...
26	...	...	240	...a	230	215	250	225	235	235	...	...	...
27	...	260	250	230	225	230	230	230	245	230	...	...	...
28	...	...	240	230	230	245	230	...b	250	250	260	...	...
29	...	...	...	230	210	215	220	215	...	235	...	...	...
30	...	...	225	230	210	220	220	215	215	220	...	...	...
31													
MEAN*	...	260	240	235	220	216	219	216	225	227	233	245	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 18

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.5	0.8	0.7	0.7	0.8	0.8	1.8	1.3	1.2	1.0	0.9	0.6	1.2	2.4	3.0	3.3	3.6	3.7	3.8	3.9	3.8	3.5	3.1	2.5	1.6
2	...	0.5	0.7	0.8	0.8	1.3	1.7	1.1	1.2	1.2	1.0	0.7	0.5	1.2	2.3	3.0	3.4	3.8	3.8	4.0	4.0	3.9	3.6	3.1	2.5	1.5
3	...	0.6	0.7	0.8	0.8	1.0	0.9	1.0	1.0	0.9	0.9	0.7	0.6	1.2	2.4	3.1	3.3	3.5	3.7	3.8	3.7	3.6	3.5	3.0	2.3	1.6
4	...	0.5	0.7	0.8	0.8	0.8	0.8	1.0	0.7	0.9	0.8	0.7	0.5	1.2	2.4	2.8	3.3	3.5	3.7	3.8	3.8	3.7	3.5	3.0	2.4	1.5
5	...	0.5	0.7	0.7	0.8	...c	0.8	1.0	1.0	0.8	0.8	0.7	0.6	1.7	p2.2c	p2.8c	3.4	3.7	p3.8c	4.0	3.9	3.8	3.5	3.1	2.4	1.6
6	...	0.5	0.6	0.7	0.8	0.8	1.0	1.1	1.2	0.9	0.7	0.8	0.5	1.2	2.0	2.9	3.4	3.8	3.8	4.0	3.8	3.9	4.1	3.1	2.5	1.1
7	...	0.6	0.8	0.7	0.9	1.1	1.0	1.0	1.2	0.8	0.8	0.7	0.6	1.3	2.2	3.0	3.3	3.7	3.9	3.9	3.8	3.8	3.5	3.1	2.5	1.6
8	...	0.7	0.7	0.8	1.4	1.2	...c	1.1	1.2	1.0	1.2	1.0	0.6	1.3	2.4	3.0	3.3	3.6	3.9	4.0	4.1	3.8	3.6	3.3	2.6	2.1
9	...	0.7	0.8	0.8	1.0	1.1	1.0	0.9	1.0	0.9	0.7	0.6	0.6	1.1	2.2	3.1	3.3	3.7	3.8	3.9	3.9	3.8	3.5	3.0	2.5	1.5
10	...	0.7	0.7	0.7	1.0	1.4	1.3	1.2	1.2	0.9	0.7	0.8	0.6	0.8	2.4	3.0	3.2	3.6	3.7	3.2	3.7	3.6	3.3	2.6	1.6	1.4
11	...	0.5	0.7	0.8	1.1	1.1	1.0	1.1	1.1	0.8	0.6	1.0	0.7	1.6	2.5	2.7	3.2	3.6	3.6	3.8	3.6	3.3	3.2	3.0	2.4	1.4
12	...	0.9	1.0	1.1	1.1	...c	...c	...c	0.7	...c	0.7	1.1	0.5	1.4	2.4	2.9	3.2	3.4	...c	...c	...c	3.5	p3.2c	2.7	2.0	1.7
13	...	0.8	0.8	0.9	...c	...c	1.2	...c	...c	...c	...c	...c	...c	1.5	2.4	2.8	3.2	...c	...c	3.6	...c	...c	...c	...c	...c	...c
14	...	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.7	1.4	2.0	2.5	3.1	3.4	3.5	3.7	3.5	3.5	3.3	2.9	2.4	1.9
15	...	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.5	0.5	1.2	1.5	2.7	3.0	3.2	3.6	3.6	3.5	3.5	3.1	2.9	2.2	1.6
16	...	0.7	0.7	0.7	0.9	0.8	0.8	0.8	1.1	0.8	0.6	0.5	0.5	1.8	2.2	2.8	3.1	3.3	3.4	3.5	3.4	3.5	3.1	2.9	2.3	1.6
17	...	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	1.6	2.5	3.0	3.3	3.4	3.8	3.6	3.5	3.3	3.3	2.9	2.3	1.4
18	...	0.7	0.8	1.0	0.8	0.8	1.1	0.9	0.7	0.7	0.7	0.5	0.5	1.6	2.4	2.9	3.5	3.5	3.6	3.7	3.7	3.5	3.3	2.9	2.3	1.6
19	...	0.6	0.9	0.9	0.9	0.9	1.0	1.0	0.8	0.7	0.7	0.6	0.7	1.7	2.6	3.1	3.4	3.7	3.6	3.7	3.7	3.6	3.4	3.0	2.5	1.6
20	...	0.7	0.8	1.0	1.2	1.1	1.1	1.1	1.0	1.3	3.8	1.5	0.6	1.6	2.5	3.1	3.5	3.7	3.8	3.7	3.6	3.5	3.4	...b	2.9	1.8
21	...	0.6	0.8	0.9	1.0	1.2	1.0	1.1	1.0	0.8	0.6	0.6	0.5	1.6	2.5	3.2	3.4	3.5	3.9	3.8	3.8	3.7	3.4	3.0	2.5	1.6
22	...	0.6	0.6	0.9	1.1	1.1	1.3	1.3	1.1	0.8	0.7	0.5	0.5	1.8	2.6	3.1	3.3	3.6	3.8	3.8	3.9	3.7	3.5	3.2	2.5	1.6
23	...	0.6	0.8	0.9	1.1	1.1	1.1	1.0	0.9	0.8	0.8	0.6	0.5	1.8	2.5	3.0	3.5	3.8	3.8	3.9	3.8	3.7	3.5	3.1	2.6	1.6
24	...	0.7	0.9	1.1	1.3	1.8	1.9	1.1	1.0	1.0	0.9	0.7	0.7	1.8	2.5	3.1	3.6	3.8	3.9	3.8	3.9	3.8	3.6	3.2	2.5	1.7
25	...	0.8	0.8	0.7	0.7	0.7	1.1	0.8	0.9	0.8	0.8	0.7	0.5	1.9	2.6	3.1	3.5	3.8	3.9	4.0	3.9	3.8	3.6	3.2	2.6	1.7
26	...	0.7	1.1	2.8	2.2	2.0	1.9	1.8	1.1	1.1	1.1	0.8	0.5	1.8	2.6	3.2	p3.5a	4.3	4.2	4.5	4.1	3.9	3.7	3.3	2.7	1.8
27	...	0.7	0.7	0.9	1.0	0.7	0.5	0.6	0.7	0.8	0.7	0.7	0.7	1.8	2.6	3.0	3.4	3.8	4.2	3.8	3.7	3.8	3.6	3.2	2.5	1.7
28	...	0.7	0.8	0.8	1.1	1.3	1.2	2.2	2.1	1.1	0.8	0.6	0.7	1.9	2.8	3.1	3.5	3.8	3.8	3.7	p3.8b	3.8	3.6	3.2	2.6	1.8
29	...	1.1	1.5	1.3	1.3	1.3	1.3	1.3	1.4	1.2	0.8	0.8	0.6	2.2	2.9	3.3	3.6	3.8	4.0	4.2	4.0	4.0	3.8	3.3	2.6	1.8
30	...	0.7	0.7	0.7	1.1	1.2	1.4	1.2	1.1	1.1	0.8	0.8	0.6	2.0	2.8	3.2	3.6	3.8	4.0	3.9	4.0	3.8	3.5	3.3	2.6	1.7
31																										
MEAN*	...	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.8	0.6	1.5	2.4	3.0	3.4	3.6	3.8	3.8	3.8	3.7	3.5	3.1	2.4	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 19

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1938 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — OCTOBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.6	6.7	6.2	5.0	4.1	4.3	...c	...c	...c	8.4	7.7	9.3	10.4	9.7	10.4	10.7	9.8	8.7	8.2	7.5	7.0	7.2	7.0	6.5	...
2	6.2	5.5	4.9	4.5	4.5	4.6	6.6	8.7	10.2	10.3	10.7	11.4	11.8	11.6	12.0	11.7	11.5	10.9	10.4	9.3	9.1	8.0	7.3	7.0	8.7
3	6.9	6.8	6.5	6.1	6.1	6.2	7.4	9.5	10.0	11.2	11.2	12.0	12.2	12.2	11.9	12.0	11.8	11.3	10.8	10.2	9.4	8.5	7.6	7.5	9.4
4	7.5	7.4	6.9	6.5	6.0	6.0	7.1	10.5	10.9	11.6	11.8	12.2	12.5	12.6	12.6	12.5	12.0	11.7	11.1	10.2	8.9	8.3	7.8	8.0	9.7
5	8.0	7.5	6.0	5.4	4.7	4.8	6.3	7.5	7.7	8.0	8.3	9.0	9.8	9.7	9.7	9.7	9.8	10.0	9.7	8.8	7.9	7.1	6.7	6.4	7.8
6	6.2	6.2	5.6	4.9	4.8	4.6	6.3	3.6	9.7	10.6	11.1	p11.4	11.6	11.7	11.2	11.1	10.8	10.6	11.3	9.7	9.0	8.0	7.4	7.1	8.7
7	7.3	6.9	6.5	6.1	5.9	6.0	7.4	10.0	10.8	11.1	11.3	11.7	12.2	12.1	12.0	12.0	11.6	11.6	11.5	10.6	10.6	8.9	7.7	7.2	9.5
8	6.2	6.1	6.1	5.8	5.9	5.4	5.1	5.2	5.0	5.0	5.3	5.4	5.4	5.3	5.6	5.9	6.0	5.5	5.8	4.9	5.2	5.3	5.3	5.2	5.5
9	4.5	4.2	4.0	3.6	3.3	3.5	5.5	8.2	9.0	9.3	10.1	10.1	10.9	11.0	10.7	10.9	10.5	10.5	10.5	9.8	8.7	7.4	6.7	5.9	7.9
10	5.0	4.6	4.7	4.4	4.3	4.4	6.0	7.4	7.5	7.8	8.4	9.9	10.8	11.4	11.5	11.1	10.5	9.5	9.5	9.7	8.0	7.7	6.8	6.5	7.8
11	6.3	6.0	5.5	4.5	3.8	3.9	5.8	7.3	9.2	10.3	10.4	11.1	11.6	11.6	12.0	11.4	10.9	10.4	10.2	9.7	9.0	8.3	7.8	7.6	8.5
12	7.3	6.6	6.1	5.7	5.5	5.6	6.6	7.2	8.0	9.4	10.2	10.4	10.7	10.5	10.2	10.0	10.3	10.2	9.9	9.1	8.3	7.7	7.6	7.3	8.4
13	6.8	6.6	6.1	5.0	4.7	4.7	6.5	8.6	9.8	10.5	10.9	12.0	12.1	12.0	11.5	12.0	11.5	10.8	10.5	9.7	9.3	9.3	9.4	8.8	9.1
14	7.8	6.9	6.1	5.8	5.5	5.7	7.8	8.5	9.4	10.4	10.7	11.5	12.2	12.0	12.0	p11.8c	11.4	11.0	10.6	10.0	9.2	8.8	8.4	8.1	9.2
15	8.1	7.8	6.7	6.0	5.4	5.4	7.3	8.6	p9.3c	10.0	10.8	11.6	12.0	12.1	12.3	12.2	11.6	11.5	11.2	10.1	9.6	9.0	8.1	8.0	9.4
16	8.0	7.6	7.4	6.8	6.2	6.1	7.0	7.2	7.7	7.7	8.4	8.6	9.0	9.4	9.5	9.0	9.0	9.3	9.1	8.8	8.1	7.8	7.6	7.4	8.0
17	7.2	7.5	6.5	5.7	5.1	5.0	5.6	p6.5c	p7.5c	8.1	8.8	9.6	9.9	9.7	9.8	9.1	9.3	9.7	9.8	9.2	7.9	7.4	7.1	6.9	7.9
18	6.9	6.4	6.0	5.5	5.4	5.6	7.1	8.2	9.6	10.9	11.0	10.8	11.0	11.0	11.0	11.0	10.5	10.3	10.3	10.0	p9.0c	8.3	8.3	7.9	8.8
19	7.7	6.7	6.2	5.9	5.7	6.0	7.8	9.0	9.8	10.2	11.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
20	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.6	10.7	11.5	11.6	11.6	11.3	11.4	11.1	11.3	10.7	9.6	8.2	7.8	7.2	6.9	...
21	6.7	6.3	5.5	5.1	5.0	...c	...c	...c	...c	9.4	9.9	11.0	11.2	11.3	11.0	10.9	10.2	9.9	9.7	9.0	8.3	7.6	7.3	7.5	...
22	7.1	6.5	5.3	5.0	5.4	5.5	6.8	7.1	8.1	8.8	10.1	10.0	10.2	9.9	9.6	9.4	9.4	9.7	9.8	9.2	7.7	7.1	6.6	6.5	8.0
23	6.1	5.8	5.5	5.0	4.9	4.8	6.7	5.4	8.8	9.1	10.2	10.2	10.0	10.4	10.7	10.4	9.9	11.0	10.5	9.7	9.3	8.0	7.3	7.5	8.2
24	7.6	7.3	6.5	5.8	5.3	4.8	5.7	6.2	6.4	6.9	7.6	8.0	8.3	7.9	8.0	7.6	7.5	7.6	7.6	7.4	7.3	6.9	6.9	6.8	7.0
25	6.6	5.9	5.7	5.4	4.9	5.0	5.5	6.0	6.5	6.2	7.1	7.4	7.5	7.6	7.9	7.4	7.8	7.9	8.2	8.7	8.1	7.8	7.7	8.0	7.0
26	8.5	6.2	6.1	5.6	5.5	5.2	6.5	7.2	7.6	7.9	9.0	9.7	9.6	9.8	10.1	9.7	9.9	9.6	9.5	8.9	8.4	8.0	7.8	7.4	8.1
27	7.1	6.8	6.4	5.9	5.4	5.2	5.7	5.9	6.2	6.9	7.9	8.1	9.0	9.8	10.2	9.5	9.9	9.5	9.5	9.0	8.0	7.7	7.9	8.1	7.7
28	7.4	6.7	6.6	6.0	5.9	5.9	5.9	6.3	6.9	7.5	8.3	8.9	9.2	8.7	9.5	9.5	8.8	8.4	8.7	8.5	7.5	6.8	6.5	6.3	7.5
29	6.8	6.3	5.4	5.2	4.8	4.8	5.8	6.8	7.7	8.0	8.7	9.6	10.4	10.3	10.2	9.7	9.8	9.3	9.5	9.2	8.5	8.0	7.8	7.3	7.9
30	7.3	7.0	6.6	6.1	6.0	6.1	8.1	9.5	10.3	10.5	10.8	10.8	11.5	12.0	12.0	11.7	11.2	10.9	10.6	10.0	9.0	8.4	8.4	7.9	9.3
31	7.7	7.5	6.9	6.6	5.9	6.2	7.7	9.2	10.0	10.9	10.9	p11.0c	p11.5c	12.0	p12.0c	11.6	11.3	10.6	7.3	10.3	9.6	8.9	8.2	8.1	9.2
MEAN*	7.0	6.5	6.0	5.5	5.2	5.2	6.6	7.8	8.6	9.1	9.7	10.1	10.5	10.6	10.6	10.4	10.2	10.0	9.7	9.2	8.4	7.9	7.5	7.2	8.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 20

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1938 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — OCTOBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	290	285	235	250	375	350	...c	...c	...c	290	490	430	400	485	400	290	230	245	270	245	275	275	265	250	...
2	260	245	240	290	300	290	250	240	245	255	320	275	275	285	330	275	270	245	235	240	245	250	250	275	266
3	300	285	250	270	275	260	245	245	245	275	260	285	300	275	275	320	240	245	240	250	240	245	250	260	264
4	260	260	250	250	285	260	240	245	240	265	275	300	300	300	280	260	240	245	245	240	240	255	270	280	262
5	255	240	225	250	290	295	270	270	300	330	350	340	330	330	230	240	250	250	250	230	220	250	260	275	272
6	280	260	275	255	260	275	265	250	240	295	290	p300	315	325	200	235	245	245	250	235	245	250	270	290	p269
7	275	250	240	260	275	280	260	245	240	260	275	270	305	280	310	315	255	260	250	265	235	270	260	335	270
8	360	350	375	385	360	365	445	520	620	690	735	680	650	...	645	530	370	300	280	290	340	310	310	270	...
9	270	270	300	305	340	310	270	275	280	285	300	295	295	300	290	300	240	250	245	220	220	225	250	250	274
10	p250a	p260a	270	270	255	255	240	240	305	380	330	340	335	325	310	290	245	250	250	235	250	245	265	280	278
11	275	235	240	230	260	280	250	240	240	280	285	305	310	315	305	275	255	240	245	270	250	290	265	275	267
12	265	245	240	280	275	265	260	240	300	290	290	280	290	275	295	300	240	250	245	230	280	250	290	275	269
13	315	260	280	...a	260	280	250	240	240	270	275	310	295	295	370	295	240	245	240	255	260	265	270	265	...
14	255	250	250	270	260	260	240	230	230	220	300	280	295	280	295	p290c	280	255	240	240	235	250	245	265	p259
15	260	230	220	235	240	255	235	235	p265c	295	290	290	285	305	290	280	265	250	250	230	255	240	260	280	260
16	265	255	250	240	240	275	245	250	310	265	340	350	350	340	320	310	305	280	250	240	245	265	270	275	280
17	280	260	255	255	280	280	250	p250c	p280c	320	335	315	330	310	305	260	260	250	260	235	220	265	275	270	275
18	275	280	260	260	270	280	250	240	260	290	280	285	295	310	300	280	260	250	250	230	230	280	280	260	269
19	265	245	245	250	265	280	250	245	280	260	290	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
20	...c	...c	...c	...c	...c	...c	...c	...c	...c	265	290	305	290	315	320	300	275	270	210	215	260	260	230	290	...
21	270	225	260	270	...c	...c	...c	...c	...c	290	340	305	310	310	310	300	265	250	245	230	240	260	280	275	...
22	270	260	260	280	300	300	270	230	310	310	310	310	320	310	310	320	320	280	250	230	220	250	285	280	283
23	270	260	260	250	250	270	250	230	265	280	300	310	295	315	310	300	320	260	250	230	230	260	280	280	272
24	280	260	260	270	280	300	250	280	320	420	370	380	355	400	360	370	350	280	270	240	270	280	300	305	310
25	270	300	275	290	290	320	260	375	335	480	410	400	420	425	340	380	330	250	280	255	250	260	275	290	323
26	240	260	280	280	280	280	250	270	300	340	335	315	325	340	325	310	315	250	265	260	250	280	280	300	289
27	300	295	285	255	280	300	275	410	450	415	360	375	360	335	320	300	280	245	250	265	275	265	290	295	312
28	250	275	270	300	285	310	270	260	410	410	410	380	360	415	355	310	270	245	260	245	245	300	310	375	318
29	...a	...a	...a	...a	295	325	260	340	335	330	340	330	325	360	355	340	290	235	265	245	245	265	275	280	...
30	280	285	270	280	300	305	250	245	290	280	290	300	350	340	320	310	240	245	255	235	250	260	270	290	281
31	275	280	265	250	250	270	240	245	290	300	335	p335c	p335c	350	p320c	280	320	240	260	250	250	255	275	275	280
MEAN*	275	264	262	269	282	289	260	275	303	320	336	334	333	340	327	306	276	254	252	243	249	262	272	282	286

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 21

OCTOBER 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1938

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	5.2	6.0	6.1	6.1	6.2	6.0	6.4	...	...	...
2	...	...	4.3	4.8	6.0	5.2	4.8	5.3	6.2	5.3	5.4	...	...
3	...	..	4.2	5.5	5.3	5.3	6.0	5.0	5.0	6.0	...	...	...
4	...	...	4.	5.3	5.5	6.3	6.4	5.5	5.3	4.9	...	...	...
5	...	4.2	4.9	5.3	4.9	5.5	5.5	5.5	...	...	...	...	...
6	...	...	...	5.1	5.2	...	5.5	5.5	5.5	...	...	...	...
7	...	...	...	5.0	4.8	5.0	4.8	5.1	5.0	5.5	...	...	...
8	3.1	3.8	4.1	4.3	4.5	4.7	4.8	4.8	4.8	...a	...	3.5	...
9	...	4.3	4.8	5.0	5.5	5.5	5.5	5.5	5.5	5.1	...	...	...
10	...	...	4.8	5.0	5.0	5.2	5.1	5.3	5.0	4.7	...	...	...
11	...	...	...	5.1	5.0	5.4	5.5	5.5	5.3	4.5	4.2	...	...
12	...	...	4.9	5.3	5.1	4.9	5.1	5.3	5.1	5.1	...	...	...
13	...	...	...	5.1	5.1	5.5	5.2	4.6	4.4	4.9	...	...	...
14	...	...	...	...	5.5	5.4	5.5	5.3	5.5	...c	5.0	...	...
15	...	...	...	5.0	5.0	4.6	5.4	5.4	4.3	4.8	4.4	...	...
16	...	...	4.9	4.2	5.2	5.5	5.5	5.4	5.3	5.3	4.8	4.2	...
17	...	...	...	5.1	5.4	5.4	5.5	5.2	5.2	4.5	4.5	...	...
18	...	...	4.2	4.9	5.0	5.3	5.2	5.6	4.8	4.9	4.2	...	...
19	...	...	...	4.8	5.3	...c	...c	...c	...c	...c	...c	...c	...
20	...	...c	...c	5.0	5.2	5.5	5.2	5.5	5.5	5.0	4.5	...	...
21	...	...	...	5.1	5.5	5.3	5.0	5.5	5.4	5.0	3.8	...	...
22	...	...	5.1	5.3	5.3	5.2	5.5	5.2	5.3	5.5	4.8	4.8	...
23	...	...	4.5	5.2	5.4	5.5	5.1	5.5	5.1	5.0	5.1	5.0	...
24	...	3.8	4.5	5.4	5.2	5.4	5.2	5.4	5.4	5.4	5.3	...	...
25	...	4.4	4.8	5.0	5.0	5.2	5.2	5.6	5.3	5.5	5.0	...	...
26	...	...	5.0	4.9	5.3	5.9	5.5	6.0	5.8	5.8	5.3	...	...
27	...	5.1	4.8	4.9	5.5	5.5	5.6	5.5	5.7	5.4	4.1	...	...
28	...	4.9	5.1	5.1	5.3	6.0	6.1	6.0	5.0	5.3	4.8	...	...
29	...	4.1	5.2	5.4	5.6	5.5	5.5	6.3	6.3	...	5.1	...	...
30	...	...	5.0	5.4	5.5	5.5	6.1	6.5	5.6	5.6	...	...	...
31	...	...	5.1	5.4	6.2	...c	...c	6.4	...c	5.2	5.6	...	...
#MEAN	3.1	4.3	4.7	5.1	5.3	5.4	5.4	5.5	5.3	5.0	4.8	4.4	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	240	215	225	225	220	230	230	...	...	...
2	...	...	230	215	215	215	200	205	240	220	230	...	...
3	...	...	230	250	230	200	220	210	210	235	...	...	...
4	...	...	230	225	220	220	240	225	240	235	...	...	...
5	...	260	240	220	225	215	210	240	...	...	...	...	...
6	...	...	...	240	220	...	250	240	240	...	...	...	...
7	...	...	...	230	225	220	210	240	230	250	...	...	...
8	325	280	250	250	215	225	275	265	285	...a	...	265	...
9	...	250	250	250	210	205	260	230	225	230	...	...	...
10	...	...	240	225	210	290	230	230	245	240	...	...	...
11	...	...	...	245	230	225	205	240	235	230	220	...	...
12	...	...	240	230	230	220	220	230	240	230	...	...	...
13	...	...	...	240	250	210	230	230	240	230	...	...	...
14	...	...	...	...	205	210	220	200	210	...c	225	...	...
15	...	...	...	230	220	190	230	250	210	240	240	...	...
16	...	...	220	210	210	235	220	240	240	230	230	250	...
17	...	...	...	205	200	200	200	205	250	235	240	...	...
18	...	...	230	220	220	220	200	220	200	220	220	...	...
19	...	...	...	220	205	...c	...c	...c	...c	...c	...c	...c	...
20	...	...c	...c	220	220	230	220	200	230	230	210	...	...
21	...	...	...	235	220	210	225	205	200	250	225	...	...
22	...	...	225	220	210	240	250	250	230	230	250	230	...
23	...	...	220	240	260	215	210	210	210	220	230	240	...
24	...	225	220	220	200	210	210	210	225	230	220	...	...
25	...	250	240	220	240	220	255	220	210	210	250	...	...
26	...	...	220	245	220	255	210	245	250	240	250	...	...
27	...	250	240	235	220	230	230	220	235	230	230	...	...
28	...	240	240	225	220	210	210	220	240	245	230	...	...
29	...	230	240	230	220	210	200	230	230	...	240	...	...
30	...	...	230	230	220	240	220	210	230	235	...	...	...
31	...	...	230	225	230	...c	...c	230	...c	235	230	...	...
#MEAN	325	284	233	230	220	221	224	226	231	232	232	246	...

= ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 22

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1938 | OCTOBER 1938

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.7	0.7
2	...	0.6	0.7	0.9	1.0	1.2	1.0	1.0	0.9	1.0	1.0	0.9	0.7
3	...	0.8	0.8	0.9	0.9	0.8	0.9	0.9	1.0	0.9	0.7	0.7	0.6
4	...	0.7	1.0	1.1	1.2	1.1	1.1	1.7	1.0	0.9	0.8	0.7	0.6
5	...	0.6	1.1	1.0	1.8	1.7	1.2	1.8	1.8	1.7	1.0	0.7	0.6
6	...	0.7	1.0	1.0	1.7	...	1.8	1.8	1.2	1.0	0.8	0.5	0.7
7	...	0.7	0.9	0.8	0.8	1.1	1.2	0.8	1.2	0.8	0.8	0.7	0.5
8	...	0.5	0.8	1.0	1.2	1.8	2.7	1.9	3.5	1.7	0.9	0.7	0.6
9	...	0.8	0.8	1.1	1.4	1.2	1.5	1.7	1.2	1.0	0.9	0.7	0.8
10	...	0.7	0.7	0.7	0.9	0.9	0.8	1.0	0.8	0.8	0.8	0.6	0.5
11	...	0.7	0.9	0.8	0.9	0.7	0.9	0.9	0.9	0.9	0.7	0.6	0.7
12	...	0.6	0.8	0.8	0.9	0.9	0.9	2.0	1.0	0.8	0.5	0.5	0.5
13	...	0.7	0.9	1.0	1.2	1.4	1.0	1.1	0.7	1.1	0.8	0.8	0.6
14	...	0.6	1.0	1.1	1.1	1.0	1.0	1.2	0.9	...c	0.5	0.5	0.7
15	...	0.5	...c	1.1	1.2	1.7	1.8	1.8	1.0	1.1	1.2	1.0	0.5
16	...	1.3	1.8	0.9	0.9	1.0	1.0	1.1	1.7	1.0	1.8	1.3	1.3
17	...	...c	...c	0.9	1.0	1.1	1.7	1.7	1.1	1.8	1.7	1.2	1.2
18	...	1.2	1.2	1.8	2.2	1.2	1.2	1.7	1.1	0.9	0.7	0.8	0.5
19	...	1.1	1.7	0.9	1.0	...c	...c	...c	...c	...c	...c	...c	...c
20	...	...c	...c	1.8	1.2	1.8	1.1	1.0	0.9	0.8	0.8	1.0	0.5
21	...	...c	...c	1.0	1.2	0.8	1.0	1.8	1.0	1.2	0.8	0.8	0.5
22	...	0.8	0.8	0.8	0.9	1.0	1.1	1.1	1.2	1.0	1.0	0.7	0.5
23	...	1.1	0.8	0.8	0.9	0.8	1.1	1.0	1.0	1.0	0.9	0.8	0.5
24	...	0.9	0.9	1.0	1.0	1.0	1.1	1.0	0.8	0.8	0.8	0.8	0.8
25	...	0.6	0.9	0.8	0.9	1.0	1.1	1.0	1.0	1.0	1.0	0.7	0.5
26	...	0.5	0.8	0.9	0.9	1.0	0.9	1.4	1.0	1.1	0.8	0.7	0.7
27	...	0.7	0.8	1.0	1.1	1.1	1.2	1.7	1.8	1.3	1.0	0.8	0.8
28	...	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.6
29	...	0.7	1.0	1.0	1.2	1.7	1.3	1.8	1.2	1.1	0.8	0.7	0.5
30	...	0.8	0.8	1.1	1.1	1.1	1.1	1.2	1.2	1.0	1.0	0.7	0.7
31	...	0.8	0.9	1.4	0.9	...c	...c	1.1	...c	1.0	1.1	0.9	0.9
* MEAN	...	0.8	1.0	1.0	1.1	1.2	1.2	1.4	1.2	1.1	0.9	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...c	...c	...c	3.5	3.8	4.0	3.9	3.8	3.8	3.6	3.2	2.6	1.8
2	1.9	2.7	3.3	3.5	3.7	3.9	3.9	3.9	3.8	3.6	3.2	2.6	1.8
3	1.9	2.6	3.1	3.4	3.8	3.9	4.0	3.9	3.9	3.6	3.2	2.6	1.8
4	2.0	2.6	3.2	3.6	3.7	4.0	3.9	3.9	3.8	3.6	3.2	2.6	1.7
5	2.1	2.7	3.2	3.5	3.6	3.5	3.8	3.3	3.8	3.3	3.3	2.6	1.8
6	2.1	2.6	3.2	3.5	3.6	...	3.7	3.9	3.9	3.7	3.2	2.6	1.8
7	2.0	2.6	3.2	3.3	3.6	3.6	3.5	4.1	3.8	3.5	3.1	2.5	1.8
8	2.1	2.6	3.0	3.5	3.7	3.8	4.1	3.9	3.9	p3.6a	2.7	2.7	2.2
9	1.8	2.7	3.1	3.3	3.6	3.6	3.6	3.5	3.8	3.5	3.2	2.6	1.7
10	1.9	2.6	2.9	3.3	3.5	3.9	3.8	3.7	3.9	3.3	2.9	2.4	1.6
11	1.9	2.7	3.2	3.3	3.5	3.8	3.7	3.7	3.7	3.5	3.1	2.6	1.6
12	1.9	2.6	3.0	3.4	3.4	3.6	3.7	3.8	3.7	3.4	2.9	2.6	1.7
13	1.8	2.6	3.1	3.2	3.3	3.6	3.3	3.6	3.3	3.0	1.5	2.3	1.8
14	1.2	2.6	3.0	3.3	3.6	3.7	4.0	4.0	3.8	...c	3.1	2.5	1.6
15	2.1	2.6	p3.0c	3.3	3.4	3.3	3.5	3.6	3.7	3.6	3.2	2.6	1.8
16	2.1	2.6	3.3	3.6	3.9	4.1	4.0	3.9	3.9	3.6	3.2	2.7	1.8
17	1.9	p2.8c	p3.3c	3.5	3.7	4.0	4.0	4.2	3.8	3.6	3.2	2.8	1.9
18	2.1	2.8	3.3	3.5	3.7	3.7	4.0	4.1	3.8	3.7	3.2	2.9	2.0
19	1.9	2.8	3.3	3.5	3.8	...c	...c	...c	...c	...c	...c	...c	...c
20	...c	...c	...c	3.7	3.7	3.9	3.6	3.9	3.9	3.6	2.2	1.7	1.1
21	...c	...c	...c	3.5	3.9	3.9	4.1	4.0	3.8	3.9	3.2	2.7	2.0
22	2.3	2.8	3.3	3.7	3.7	3.8	3.8	3.8	3.7	3.5	3.3	2.6	1.8
23	2.0	2.7	3.2	3.5	3.7	3.8	3.9	3.9	3.7	3.6	3.2	2.7	1.9
24	2.2	2.7	3.1	3.4	3.8	3.9	4.0	3.9	4.0	3.3	2.7	2.4	1.9
25	2.3	2.8	3.3	3.3	3.6	3.7	3.7	3.5	3.8	2.8	3.4	2.7	2.0
26	2.3	2.8	3.3	3.4	3.5	3.6	3.9	3.8	3.7	3.6	3.3	2.7	1.9
27	2.0	2.5	3.2	3.3	3.5	3.5	3.4	3.6	3.3	3.4	3.1	2.6	1.8
28	2.1	2.8	3.3	3.5	3.8	3.9	3.8	3.7	3.5	3.6	3.3	2.7	2.0
29	2.3	2.9	3.3	3.6	3.6	3.6	4.0	3.9	3.8	3.6	3.3	2.8	2.1
30	2.2	2.9	3.3	3.6	3.5	3.5	3.5	3.3	3.3	3.8	3.4	2.9	1.8
31	2.3	2.9	3.3	3.6	3.8	p3.8c	p3.8c	3.8	p3.7c	3.7	3.4	2.8	2.1
* MEAN	2.0	2.7	3.2	3.4	3.6	3.8	3.8	3.8	3.7	3.5	3.1	2.6	1.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 23

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1938 NOVEMBER 1938

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	7.8	7.3	7.0	6.6	6.2	6.4	8.3	9.7	10.1	10.6	11.0	11.2	11.7	11.7	11.4	11.2	10.8	10.5	10.4	10.1	9.0	8.5	8.0	7.7	9.3
2	7.8	7.7	7.3	6.6	6.1	6.1	7.9	9.2	10.2	10.6	11.0	11.4	11.5	11.6	11.5	11.3	11.0	10.9	10.7	10.1	9.0	8.4	8.0	7.9	9.3
3	7.0	6.9	7.0	7.2	6.7	6.5	8.0	9.3	10.1	10.4	11.0	11.2	11.1	10.9	10.9	10.2	9.9	9.7	9.2	9.0	8.4	7.7	7.5	7.3	8.9
4	7.0	6.8	6.0	5.7	5.4	5.5	7.3	8.6	9.2	9.5	10.2	10.7	11.2	11.4	11.3	...c	...c	...c	10.2	9.8	9.1	8.7	8.4	8.2	...
5	7.5	6.9	6.6	6.5	6.1	6.6	8.0	8.8	9.3	10.2	10.3	...c	...c	10.5	...c	10.6	10.5	10.4	10.5	10.3	9.5	8.8	8.2	7.6	...
6	7.4	6.8	6.9	6.7	6.6	7.0	8.0	9.2	10.1	...c	...c	...c	...c	...c	...c	...c	10.5	10.5	10.5	10.2	9.6	8.4	8.2	8.1	...
7	7.6	7.2	7.0	6.9	6.2	6.2	7.4	7.8	8.0	8.3	8.3	8.8	8.9	9.1	9.0	...c	...c	8.3	...c	7.9	7.4	7.3	7.3	7.2	...
8	7.2	6.6	6.0	5.6	5.5	5.7	6.5	7.6	8.1	8.8	9.6	9.8	10.5	10.9	10.5	10.2	9.9	9.3	9.0	8.9	8.1	8.0	7.6	7.9	8.2
9	7.6	6.7	6.3	5.9	5.4	4.9	4.9	5.4	5.5	6.0	6.0	6.3	6.2	6.3	6.5	6.6	6.6	6.9	7.0	6.5	6.4	6.3	6.2	6.5	6.2
10	6.1	6.3	5.5	5.2	4.9	5.2	6.0	6.1	8.4	10.0	9.8	10.6	10.7	11.1	10.3	9.6	9.2	9.1	9.5	8.9	8.0	7.6	7.3	7.0	8.0
11	6.8	6.6	6.0	5.4	5.2	5.3	6.6	7.7	8.3	9.2	10.2	10.5	11.1	11.4	11.4	11.4	10.8	10.4	10.2	9.6	9.2	9.0	8.4	8.1	8.7
12	7.9	7.6	6.9	6.9	6.3	6.5	7.8	9.0	9.7	9.8	10.4	10.9	11.7	12.0	11.4	10.9	10.3	10.3	10.4	10.2	9.6	9.0	8.7	7.9	9.2
13	7.8	7.6	6.9	6.4	6.1	6.6	7.7	9.0	9.1	9.5	10.2	10.4	10.8	11.3	11.3	11.2	10.7	10.4	10.3	10.3	9.7	9.9	8.4	8.0	9.2
14	8.0	8.2	7.8	6.8	6.2	6.6	7.6	8.3	9.3	10.3	10.9	11.2	11.3	11.6	11.8	11.5	11.5	10.8	10.7	10.4	10.0	9.4	8.8	8.4	9.5
15	8.3	7.8	7.1	6.7	7.0	7.2	7.5	6.6	6.7	6.5	6.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.9	6.4	6.4	6.3	...
16	6.3	5.8	5.2	5.0	4.9	5.3	5.5	5.7	5.8	6.3	6.5	6.7	6.8	7.5	7.6	7.8	7.9	7.9	7.7	7.4	7.2	6.4	6.5	6.3	6.5
17	6.7	6.3	6.3	5.9	5.5	5.7	7.7	7.6	7.5	8.3	9.0	9.7	p10.0c	10.2	10.2	9.9	9.9	9.2	9.0	8.4	8.0	7.1	6.7	6.3	p8.0
18	5.9	5.9	6.4	6.3	5.5	6.0	7.5	9.0	11.0	12.2	12.4	11.8	12.0	p11.8c	11.6	11.0	10.5	9.9	9.7	9.4	8.3	8.4	8.0	7.6	p9.1
19	7.4	6.4d	5.5	5.7	5.2	5.1	6.5	7.0	7.4	7.4	8.4	8.9	9.1	9.1	9.5	9.4	9.4	9.5	9.3	8.9	8.4	8.0	p7.8c	7.7	p7.8
20	7.2	6.8	5.9	5.5	5.5	5.6	6.9	7.7	8.3	9.0	9.6	10.2	10.1	10.3	10.3	10.2	9.8	9.4	9.3	9.3	8.2	8.0	7.8	7.4	8.3
21	7.0	6.7	6.3	6.2	6.3	6.6	7.4	7.1	7.5	8.0	8.8	9.1	10.8	10.1	10.2	10.0	9.9	9.8	9.6	8.6	8.8	7.8	7.8	7.6	8.2
22	7.1	6.9	5.8	5.2	4.9	5.2	5.8	5.8	6.5	7.0	7.1	7.0	6.9	7.9	8.0	7.9	7.5	7.3	7.3	7.5	6.6	6.8	6.3	6.0	6.7
23	6.1	6.1	5.3	5.2	5.0	5.2	6.1	6.8	p7.3a	7.9	8.9	9.5	10.8	11.2	11.0	9.9	9.2	9.3	9.7	9.8	9.5	9.0	7.7	7.3	8.1
24	6.8	6.8	6.8	6.1	5.8	5.3	6.0	7.8	8.6	10.4	10.4	10.6	10.4	10.2	10.3	10.5	10.2	...c	...c	...c	...c	...c	...c	...c	...
25	6.9	6.8	6.2	6.1	5.8	5.9	6.5	6.9	8.0	8.9	10.0	11.2	11.3	10.6	10.6	10.0	9.5	9.2	9.4	9.6	8.8	8.1	7.5	7.6	8.4
26	6.9	6.5	6.0	6.2	5.9	5.8	6.0	6.5	6.9	7.4	7.2	7.3	7.1	8.0	7.3	7.1	7.5	8.2	7.7	8.0	7.0	6.6	6.5	6.5	6.9
27	6.5	6.3	5.5	5.3	4.8	5.1	5.8	6.8	7.0	8.0	8.3	9.0	9.4	9.4	10.1	9.6	10.0	9.6	9.4	9.0	8.6	8.4	8.3	8.4	7.9
28	7.6	7.0	6.9	6.5	6.1	6.1	6.9	7.4	8.2	8.8	10.0	10.5	...c	...c	...c	...c	10.5	...c	10.0	9.5	9.2	8.4	7.9	7.7	...
29	7.4	7.2	6.8	5.9	5.7	5.7	6.5	7.1	7.2	7.8	8.3	p9.0c	p9.5c	10.2	10.1	9.9	p9.7c	9.5	9.0	8.7	8.1	7.8	7.6	7.0	p8.0
30	7.0	6.9	6.8	6.5	6.3	6.6	8.2	9.8	10.8	11.1	11.1	11.8	...c	...c	...c	...c	...c	...c	10.4	10.4	...c	8.6	7.6	7.2	...
31																									
MEAN*	7.2	6.8	6.4	6.1	5.8	5.9	7.0	7.7	8.4	8.9	9.4	9.9	10.1	10.2	10.2	9.9	9.7	9.4	9.5	9.2	8.4	8.0	7.6	7.4	8.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 24

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1938 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — NOVEMBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	255	215	265	255	260	285	250	240	230	270	265	350	350	350	330	345	320	300	270	240	250	255	290	295	280
2	285	265	260	240	255	295	250	240	230	225	340	320	255	370	370	345	330	250	265	245	245	260	270	275	278
3	285	290	280	270	270	270	245	280	300	350	360	380	350	380	380	380	260	265	250	265	260	265	290	300	301
4	290	275	275	295	275	295	250	245	320	290	340	345	340	365	375	...c	...c	...c	250	250	260	265	275	275	...
5	270	275	275	265	280	280	250	280	280	330	300	350	335	380	350	285	290	300	290	245	240	250	260	270	289
6	275	280	290	275	270	265	250	270	270	315	330	360	350	350	360	330	360	330	275	250	245	240	280	295	296
7	280	275	280	275	275	290	250	300	365	390	410	415	430	420	410	...c	...c	310	...c	260	270	280	290	290	...
8	290	260	270	300	285	290	250	250	340	400	370	410	400	390	390	390	350	330	260	250	265	275	325	290	318
9	295	305	330	315	360	330	290	510	590	520	590	510	570	550	520	505	495	380	310	275	280	325	330	315	408
10	315	290	280	295	275	300	275	535	400	380	360	330	320	330	330	325	320	245	260	240	255	265	275	270	311
11	290	270	260	250	265	270	245	240	300	340	340	335	350	240	350	310	310	245	265	240	255	270	270	280	283
12	275	260	260	275	250	270	245	245	300	300	350	300	345	320	330	320	320	260	260	250	245	260	265	260	282
13	290	265	260	290	290	260	240	240	275	320	345	350	350	340	350	340	330	300	270	255	240	255	260	280	292
14	285	260	255	235	250	265	240	315	290	310	320	330	340	340	340	335	315	250	260	255	250	255	270	280	285
15	285	280	270	290	290	290	330	450	445	490	520	...c	...c	...c	...c	...c	...c	...c	...c	...c	265	285	360	320	...
16	280	280	215	280	290	290	330	430	500	500	500	500	500	440	440	400	360	290	280	260	260	280	235	330	353
17	290	290	260	260	270	290	260	340	410	425	400	385	395	370	360	360	320	240	275	260	270	260	280	300	316
18	320	350	310	230	250	280	240	250	320	320	300	320	320	335	340	340	290	230	280	290	260	300	...a	...a	...
19	280	270	350	300	310	310	260	280	320	330	400	430	410	400	380	380	330	315	220	250	260	260	270	260	316
20	270	250	260	280	290	290	250	250	320	350	360	360	370	360	355	350	320	300	p280a	p260a	p280a	340	280	270	308
21	270	280	280	p310a	290	315	290	300	380	390	360	370	380	350	350	360	310	320	p265a	290	250	280	305	310	317
22	310	280	290	310	330	320	320	380	450	410	410	420	530	450	405	390	400	360	260	255	270	280	280	300	392
23	330	285	270	320	360	280	260	250	...a	390	400	420	360	340	320	285	300	280	260	270	260	250	260	260	...
24	340	320	280	300	270	280	280	250	305	300	340	340	340	350	360	340	315	...c	...c	...c	...c	...c	...c	...c	...
25	315	315	300	290	280	300	260	360	350	420	390	310	310	330	340	310	270	280	250	260	250	260	280	270	304
26	225	280	300	285	260	280	270	390	420	390	410	480	510	420	440	480	430	340	260	275	280	275	315	315	347
27	330	320	290	310	290	300	360	365	400	370	400	385	330	380	340	360	320	315	230	p310a	280	270	285	260	325
28	270	280	260	255	265	290	250	360	350	380	330	350	...c	...c	...c	...c	330	...c	250	250	250	260	255	260	...
29	300	280	250	260	260	285	260	285	410	410	415	...c	...c	370	370	360	...c	310	260	260	260	270	280	285	...
30	300	300	260	260	260	280	240	280	260	310	340	340	...c	...c	...c	...c	...c	...c	280	250	...c	240	270	280	...
31																									
MEAN*	290	282	276	279	281	288	266	314	349	364	376	375	378	371	370	357	332	294	264	260	258	270	282	286	312

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 25

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1938 NOVEMBER 1938

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	5.2	5.4	7.0	6.3	6.1	5.7	6.3	6.0	5.5	...
2	...	...	...	...	6.8	6.4	6.4	6.6	6.1	6.3	6.0	...	...
3	...	5.2	5.5	6.4	6.2	6.3	5.8	6.3	6.2	6.2	5.9	...	...
4	...	...	5.2	5.5	6.6	6.3	6.9	6.4	6.8	...	...	...	...
5	...	...	...	6.5	...	6.5	6.7	7.2	6.2	...	...	...	...
6	...	...	...	5.6	5.8	6.9	7.0	6.7	6.3	6.1	6.3	6.0	...
7	...	...	5.6	5.6	5.7	5.8	5.9	6.1	5.9	...	...	...	...
8	...	...	5.6	6.3	6.2	6.2	6.0	6.1	5.8	5.8	5.7	5.4	...
9	...	4.3	4.8	4.8	5.0	5.1	5.1	5.2	5.3	5.2	4.8	5.3	...
10	...	4.6	4.8	5.3	5.6	5.7	5.5	6.0	6.4	5.9	5.6	...	...
11	...	...	5.2	5.7	6.1	6.0	5.7	6.2	6.1	5.6	5.1	...	...
12	...	...	5.4	5.0	6.5	6.5	6.0	6.0	5.5	5.5	5.5	...	...
13	...	...	4.8	5.7	6.2	6.6	5.9	5.8	5.6	5.6	6.2	5.2	...
14	...	4.7	5.5	5.5	5.5	5.8	5.6	5.8	6.1	5.7	5.5	...	...
15	4.0	5.0	5.8	4.9	5.1	...c	...c	...c	...c	...c	...c	...	...
16	3.8	4.6	4.9	5.0	5.2	5.4	5.3	5.5	5.5	5.3	5.3	3.9	...
17	...	5.5	5.5	5.8	5.6	5.7	5.8	5.8	5.5	5.8	5.2	...	...
18	...	...	6.0	5.6	6.5	5.6	5.5	6.0	5.5	6.0	...	...	...
19	...	3.8	5.7	5.3	5.6	6.1	5.9	6.0	5.5	5.6	5.1	...	...
20	...	...	5.5	5.5	5.9	5.9	6.0	5.9	5.6	5.7	4.8	...	...
21	3.8	4.5	5.1	5.4	5.5	5.7	5.5	5.5	5.5	5.5	...	...	...
22	4.0	4.4	5.0	5.0	5.0	5.2	5.2	5.3	5.2	5.1	5.0	4.6	...
23	...	...	...a	5.5	5.9	5.9	5.7	5.3	5.5	4.9	5.5	...	...
24	...	...	4.8	5.3	6.0	5.9	5.9	5.7	5.5	5.5	5.0	...	...
25	...	5.2	5.5	6.0	6.0	5.3	5.4	6.2	6.1	4.8	5.5	5.5	...
26	...	4.8	5.1	5.2	4.9	5.0	5.4	5.4	5.5	5.1	5.1	4.9	...
27	4.3	4.8	5.5	5.5	6.0	6.0	5.5	5.9	6.0	5.7	5.3	5.2	...
28	...	5.5	5.3	5.5	5.5	...	...c	...c	...c	...c	5.6	...	...
29	...	4.9	5.6	5.5	5.6	...c	...c	5.6	5.6	5.9	...c	4.5	...
30	...	4.2	4.7	5.5	5.7	5.8	...c	...c	...c	...c	...c	...c	...
31													
*MEAN	4.0	4.8	5.3	5.5	5.8	6.0	5.8	6.0	5.8	5.6	5.4	5.1	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	220	220	245	225	225	225	230	240	...
2	...	...	...	...	225	225	210	240	220	220	230	...	...
3	...	240	240	230	250	250	230	240	240	250	230	...	...
4	...	...	240	230	225	220	225	230	225	...	...	...	...
5	...	...	...	...c	...	...c	...c	295	...c	...	...	...	...
6	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
7	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...	...
8	...	...	240	240	255	225	225	230	230	250	230	250	...
9	...	255	235	230	235	250	280	280	280	260	250	280	...
10	...	245	240	240	210	215	220	230	230	220	230	...	...
11	...	...	230	225	230	225	220	225	225	245	220	...	...
12	...	...	235	225	220	220	215	270	250	230	225	...	...
13	...	...	240	225	220	215	240	220	250	225	230	260	...
14	...	230	230	230	240	230	220	220	260	260	225	...	...
15	255	245	230	220	250	...c	...c	...c	...c	...c	...c	...c	...
16	280	250	265	250	220	220	220	350	285	240	270	240	...
17	...	230	220	240	220	240	240	280	240	230	280	...	...
18	...	...	240	240	240	220	225	250	225	300	...	...	...
19	...	230	220	220	220	210	220	225	250	260	220	...	...
20	...	...	250	p245c	240	215	p220c	230	230	240	240	...	...
21	270	245	250	220	230	250	240	250	220	270	...	...	...
22	260	240	230	240	250	240	230	220	240	230	220	260	...
23	...	...	...a	215	220	230	220	230	220	230	220	...	...
24	...	...	220	230	215	220	205	220	220	250	240	...	...
25	...	230	225	220	215	225	220	220	260	230	230	260	...
26	...	230	220	250	220	220	240	240	270	270	...	200	...
27	260	260	260	230	240	210	240	230	280	230	240	240	...
28	...	220	230	220	215	...	...c	...c	...c	...c	230	...	...
29	...	230	280	230	230	...c	...c	240	250	...a	...c	240	...
30	...	220	225	250	240	240	...c	...c	...c	...c	...c	...c	...
31													
*MEAN	265	238	237	231	229	226	228	244	242	244	234	247	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 26

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.9	1.1	1.1	1.7	1.7	1.7	1.2	1.0	1.0	0.8	0.8
2	...	0.8	0.8	0.9	1.0	1.0	1.8	1.8	1.2	1.2	1.0	[illegible]	0.6
3	...	0.8	1.1	1.3	1.0	1.1	1.1	1.1	1.3	1.0	1.0	0.8	0.8
4	...	0.8	0.9	1.7	1.8	1.8	1.1	1.3	1.9	...c	...c	...c	0.6
5	...	0.8	1.5	0.8	1.7	...c	...c	...c	...c	...c	1.3	1.2	1.2
6	...	1.2	1.8	1.9	1.7	1.7	1.4	1.7	1.5	1.8	1.3	1.3	0.8
7	...	1.2	0.8	1.5	1.7	1.8	1.7	...c	...c	...c	...c	1.2	...c
8	...	0.8	0.8	0.9	1.7	1.2	1.7	1.7	1.3	1.0	1.0	0.7	0.6
9	...	0.8	1.0	1.0	1.8	1.9	1.8	1.8	1.7	1.8	1.1	1.1	0.7
10	...	0.8	1.4	1.7	2.0	1.7	1.8	1.8	1.9	1.7	1.0	1.0	0.9
11	...	0.9	0.8	0.9	1.9	1.0	1.9	1.9	1.9	1.2	1.2	1.3	1.1
12	...	0.7	0.8	1.2	1.9	1.8	1.1	1.0	1.3	1.3	0.9	0.8	0.8
13	...	1.1	0.8	1.7	0.9	0.9	0.8	1.0	2.0	1.3	1.1	0.8	0.6
14	...	0.8	0.8	0.8	1.8	1.7	1.1	1.9	1.1	1.1	1.0	0.8	0.7
15	...	0.9	0.5	1.2	1.8	...c	...c	...c	...c	...c	...c	...c	...c
16	...	1.7	2.0	1.8	1.8	1.8	1.9	1.8	1.7	1.5	0.9	0.8	0.8
17	...	1.8	1.2	1.0	1.0	1.6	1.7	1.7	1.7	1.7	1.2	0.8	2.1
18	...	0.8	1.9	1.9	1.7	1.8	1.9	1.7	1.7	1.9	1.9	1.8	0.8
19	...	0.7	1.7	1.7	1.0	1.0	1.7	1.7	2.0	1.7	0.9	0.8	0.7
20	...	0.9	0.9	1.0	1.9	1.8	1.7	1.7	1.7	1.7	1.2	0.9	0.9
21	...	1.7	1.1	1.0	1.7	1.8	1.7	1.7	1.7	1.7	0.9	0.9	0.8
22	...	0.9	0.8	1.7	1.7	1.7	1.7	1.0	1.7	0.8	0.8	0.9	0.8
23	...	1.9	...a	0.8	0.8	2.0	1.8	1.0	1.8	...	1.0	0.8	0.7
24	...	0.7	0.9	1.0	1.0	1.0	1.8	1.7	1.3	1.3	1.2	...c	...c
25	...	1.3	1.2	1.7	1.9	2.8	1.9	1.9	2.0	...	1.9	1.0	1.0
26	...	0.9	0.8	2.4	1.9	2.0	1.8	1.8	2.0	2.8	2.6	1.0	0.5
27	...	1.0	2.8	1.8	2.2	1.7	1.7	1.7	2.8	1.8	1.3	0.8	0.6
28	...	0.9	0.9	1.8	1.9	1.8	...c	...c	...c	...c	1.1	...c	0.7
29	...	0.5	0.9	1.7	1.9	...c	...c	1.9	2.0	1.3	...c	1.7	0.8
30	...	1.0	2.1	0.9	1.6	1.7	...c	...c	...c	...c	...c	...c	1.3
31													
MEAN*	...	1.0	1.2	1.4	1.6	1.6	1.6	1.6	1.7	1.5	1.2	1.0	0.9

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.7	3.0	3.6	3.7	4.1	3.9	3.9	3.7	3.8	3.5	3.3	2.8	2.0
2	2.5	2.9	3.4	2.7	3.8	4.0	3.9	4.0	3.8	3.5	3.3	2.9	2.0
3	2.4	3.0	3.5	3.6	3.9	3.8	3.9	3.6	3.7	3.8	3.4	2.8	1.9
4	2.4	3.0	3.5	3.3	3.9	3.9	4.0	3.9	3.9	...c	...c	...c	1.8
5	2.4	2.7	2.6	2.7	2.7	...c	...c	...c	...c	...c	2.7	2.9	2.0
6	2.2	2.8	2.9	2.7	2.7	2.7	2.7	2.7	p2.7c	p2.7c	2.7	2.9	2.1
7	2.3	3.0	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.8	...c
8	2.3	3.0	3.4	3.7	3.9	4.2	3.6	4.1	3.9	3.7	3.4	2.8	2.0
9	2.5	2.9	3.4	3.7	3.9	3.8	3.9	3.7	3.7	3.6	3.1	2.4	1.7
10	2.4	2.9	3.3	3.5	3.8	3.6	3.5	3.8	3.8	3.7	3.4	2.7	2.1
11	2.4	3.0	3.4	3.7	3.9	3.9	3.7	3.6	3.8	3.6	3.4	2.9	2.2
12	2.3	3.0	3.4	3.7	3.9	3.9	3.9	3.5	3.5	3.8	3.2	2.6	2.2
13	1.7	2.7	3.3	3.6	3.7	3.7	3.9	3.7	3.9	3.5	3.3	2.8	1.9
14	2.3	3.1	3.5	3.6	3.5	4.1	4.0	4.0	3.8	3.7	3.4	2.6	2.0
15	2.3	2.9	3.5	3.8	4.1	...c	...c	...c	...c	...c	...c	...c	...c
16	2.5	3.5	3.7	3.8	4.0	3.9	3.9	3.9	3.7	3.9	3.2	3.1	2.2
17	2.5	3.2	3.7	3.8	4.0	4.0	4.1	4.1	3.9	3.7	3.2	2.8	1.8
18	2.5	3.1	3.5	3.7	3.9	3.9	4.2	4.0	3.8	3.5	3.3	2.4	1.4
19	2.5	3.0	3.4	3.7	4.0	4.0	4.1	4.0	3.9	3.6	3.3	2.8	1.7
20	2.3	3.2	3.5	3.8	3.9	4.1	4.0	3.9	3.9	3.7	3.3	2.8	p1.7a
21	2.3	3.0	3.3	3.6	3.2	3.8	3.8	3.9	3.8	3.6	3.1	2.6	p2.5a
22	2.5	3.0	3.3	3.5	3.9	3.9	4.1	3.8	3.9	3.6	3.3	2.9	2.2
23	2.4	3.1	p3.5a	3.8	3.8	3.5	3.9	3.9	3.8	3.6	3.5	2.8	2.3
24	2.5	3.0	3.3	4.0	4.0	3.9	3.3	3.3	3.2	3.2	3.2	...c	...c
25	2.5	3.1	3.5	3.8	4.0	4.1	4.1	4.1	4.0	p3.7	3.4	3.1	2.3
26	2.5	3.0	3.4	3.8	4.1	4.4	4.2	4.1	4.0	3.9	4.0	3.1	2.5
27	2.8	3.5	4.2	3.9	4.0	4.1	4.1	4.1	4.2	4.2	3.3	3.1	2.4
28	2.3	3.1	3.3	3.8	4.0	4.1	...c	...c	...c	...c	3.6	...c	2.3
29	2.5	3.0	3.5	3.7	4.1	...c	...c	4.1	4.0	...a	...c	3.1	2.5
30	2.5	3.1	3.8	3.8	4.1	4.3	...c	...c	...c	...c	...c	...c	2.7
31													
MEAN*	2.4	3.0	3.4	3.6	3.8	3.9	3.9	3.8	3.8	3.7	3.3	2.8	2.1

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = $f^{0}F2$ EQUAL TO OR LESS THAN $f^{0}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 27

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1938 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — DECEMBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.7	6.8	7.0	6.5	6.2	6.5	7.5	7.9	8.7	9.6	10.3	11.0	11.3	11.4	11.1	10.5	10.2	9.8	9.6	9.5	8.9	8.5	8.3	8.3	8.8
2	8.2	7.6	7.2	6.5	6.2	6.6	8.1	9.2	9.4	10.0	10.7	11.2	11.4	11.7	11.4	10.9	10.8	10.5	10.4	10.1	9.6	9.4	9.3	9.2	9.4
3	8.8	8.2	7.3	6.3	6.0	6.0	6.7	6.2	7.1	7.7	8.7	9.2	9.3	9.4	9.2	8.7	7.2	8.1	7.5	7.4	7.3	7.2	6.5	6.1	7.6
4	6.1	5.2	4.9	4.5	4.2	5.1	6.4	8.3	9.3	8.4	9.6	9.3	9.4	8.7	3.5	7.5	7.3	7.1	7.0	7.1	7.1	7.2	6.9	6.7	7.2
5	6.6	6.2	5.8	5.6	5.8	6.2	7.4	8.5	9.5	...c	...c	...c	9.9	10.3	10.5	10.1	9.8	9.6	9.1	8.6	7.9	7.6	7.3	7.7	...
6	7.6	6.3	6.0	5.7	5.3	5.5	6.9	8.5	9.2	9.2	p9.6c	p10.0c	10.3	10.2	p10.0c	9.8	9.5	9.1	9.3	9.5	8.7	8.3	7.9	7.6	p8.3
7	7.4	7.1	7.5	8.0	6.2	6.2	7.1	7.8	9.5	6.6	7.2	7.6	11.6	11.6	11.2	11.2	10.9	10.5	10.3	9.9	9.7	9.2	8.9	8.6	8.8
8	9.2	9.2	8.7	7.8	7.5	6.9	7.3	7.5	8.3	9.5	10.3	p10.4c	10.5	10.5	p10.5c	p10.5c	10.5	10.0	10.0	9.3	8.9	8.7	8.6	8.6	9.1
9	8.6	7.8	7.2	6.8	6.5	6.5	7.7	8.8	9.7	10.5	11.0	11.3	11.4	11.5	11.5	11.2	10.9	10.1	10.0	9.6	9.5	8.9	8.3	8.2	9.3
10	8.3	7.8	6.5	6.2	6.3	6.5	7.1	7.8	7.5	8.0	9.2	9.9	9.9	9.9	9.6	9.4	9.1	8.8	8.4	8.2	8.1	7.8	7.6	7.3	8.1
11	6.8	6.6	6.3	5.8	5.1	5.1	5.1	5.0	5.5	6.1	7.4	8.3	9.1	9.2	9.2	8.6	8.5	8.4	8.0	8.5	8.6	8.5	7.9	7.5	7.3
12	7.3	6.6	6.3	5.9	5.5	5.2	5.5	6.4	7.4	7.3	7.5	7.6	7.5	7.4	7.8	7.7	7.7	7.4	7.2	7.3	7.2	7.2	6.7	6.6	6.9
13	6.9	6.5	6.3	6.2	6.1	6.6	7.7	8.2	8.4	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.3	7.2	7.0	...
14	6.9	6.6	6.3	5.8	5.6	5.6	6.2	6.9	7.2	7.2	7.3	8.0	8.7	9.0	8.9	8.7	8.4	8.2	7.8	7.8	8.3	7.8	7.5	7.2	7.4
15	6.9	6.4	6.3	6.5	6.4	6.4	7.3	8.3	8.5	8.9	8.6	8.7	10.0	10.1	10.8	10.6	10.2	9.6	9.2	9.2	9.1	8.2	7.8	7.5	8.4
16	7.1	6.7	6.5	5.9	5.8	6.0	7.6	8.4	8.0	8.4	8.9	9.5	9.7	9.8	9.5	9.0	9.2	8.6	8.9	8.7	8.4	7.7	7.8	7.3	8.1
17	7.4	7.0	6.3	6.0	5.9	6.3	6.3	6.9	7.5	8.0	8.2	p8.8c	9.5	9.2	9.8	10.5	9.9	9.7	3.9	8.3	7.5	7.4	7.3	7.3	p7.9
18	5.9	5.1	5.3	5.3	4.7	4.6	5.3	5.8	6.1	6.6	6.9	7.9	7.8	8.3	8.0	8.2	7.9	3.5	9.0	8.6	8.4	8.0	7.8	7.6	7.0
19	7.0	6.5	5.9	5.5	5.5	5.4	8.4	5.7	5.9	p6.2c	6.5	7.0	7.0	6.9	7.0	7.1	7.1	7.0	7.3	7.3	7.5	7.5	7.4	7.0	p6.7
20	6.6	5.7	5.4	5.1	4.8	4.8	5.3	5.8	6.0	6.1	p6.5c	6.9	p7.0b	7.1	7.1	7.0	7.0	6.9	7.0	7.3	7.6	7.8	7.7	7.7	p6.5
21	7.0	6.3	6.1	5.6	5.8	5.4	6.0	6.0	6.5	6.6	...c	...c	7.9	...c	...c	...c	...c	7.2	7.2	6.8	6.7	7.1	7.0	7.5	...
22	6.7	6.2	5.5	4.8	4.2	4.0	5.1	5.9	6.4	7.1	7.6	p8.2c	8.8	9.5	9.5	9.8	9.6	9.6	10.1	10.0	9.0	8.6	9.8	8.8	p7.7
23	8.0	6.3	5.4	5.3	4.9	4.7	5.0	5.1	5.5	p6.0a	7.0	8.4	8.6	8.6	9.2	9.0	8.4	8.4	8.4	8.3	8.0	8.0	7.9	8.0	p7.2
24	8.4	7.8	7.1	6.5	6.1	5.9	6.4	7.1	8.0	8.3	8.7	9.0	9.2	9.5	9.5	9.0	8.5	8.3	8.8	9.3	9.6	9.8	9.8	9.0	8.3
25	8.1	7.8	7.2	7.0	6.5	6.1	6.1	6.4	7.5	7.8	9.0	9.3	9.6	9.2	9.0	8.8	8.7	8.4	7.9	8.2	8.7	8.6	8.4	8.0	8.0
26	7.1	7.1	6.6	6.2	5.7	6.0	7.0	7.3	7.5	8.2	8.7	9.2	9.7	9.9	10.0	9.3	8.8	8.6	8.4	8.4	8.4	8.5	8.4	8.4	8.1
27	7.7	6.6	6.5	6.5	6.1	6.5	7.5	7.5	7.1	7.8	9.3	10.5	10.8	10.6	10.2	10.0	9.1	9.1	8.5	9.1	9.4	9.0	9.1	9.4	8.5
28	8.3	8.1	7.6	6.7	6.0	6.1	7.5	8.0	8.8	8.8	9.9	10.7	11.3	11.2	11.4	10.8	9.9	9.3	8.6	8.7	9.0	8.4	8.8	8.7	8.9
29	8.4	8.0	7.5	7.0	6.4	6.6	7.6	8.1	8.2	9.0	9.2	10.3	11.0	11.0	11.0	10.7	10.0	9.1	9.1	9.3	9.3	9.2	9.5	9.1	8.9
30	7.8	6.8	7.1	...c	...c	...c	...c	...c	...c	7.4	8.4	9.2	10.0	10.1	10.2	10.1	9.2	8.2	8.4	8.2	8.4	8.4	8.4	8.4	...
31	7.8	7.1	6.5	6.0	6.6	6.6	6.7	7.3	8.5	...c	...c	...c	11.6	11.5	10.1	9.5	8.8	8.3	8.0	7.7	8.2	8.2	8.0	7.3	...
*MEAN	7.5	6.9	6.5	6.1	5.8	5.9	6.7	7.2	7.8	8.0	8.6	9.2	9.8	9.8	9.7	9.4	9.1	8.8	8.6	8.5	8.4	8.2	8.1	7.9	8.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 28

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1938 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — DECEMBER 1938

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	300	320	270	275	250	260	250	230	330	365	350	350	355	345	350	335	350	330	255	260	260	300	280	280	302
2	270	265	260	280	260	280	250	240	310	330	335	350	350	340	340	340	330	310	270	250	280	275	280	280	295
3	270	275	290	280	310	290	260	465	400	490	365	p385a	410	380	390	370	375	240	260	300	280	280	310	380	336
4	330	330	330	370	330	290	240	245	290	420	340	390	400	410	390	420	410	250	260	290	330	300	280	280	330
5	300	320	350	370	...a	280	250	250	300	...c	380	...c	380	370	360	350	340	320	290	250	260	300	325	310	...
6	255	260	290	290	290	290	230	310	290	360	...c	...c	380	370	...c	370	330	320	250	260	235	250	280	290	...
7	300	350	p295a	240	240	250	250	240	250	400	400	335	350	360	365	350	345	315	280	260	270	260	260	320	p304
8	310	280	245	260	250	245	250	230	350	370	360	...c	350	390	...c	...c	360	250	265	250	260	280	280	290	...
9	270	265	275	270	270	250	240	240	240	350	370	380	365	375	365	380	340	320	260	260	245	250	260	280	297
10	265	260	255	300	310	300	250	340	390	440	410	390	430	410	410	410	380	360	255	270	275	280	300	300	333
11	320	390	390	370	370	400	510	680	590	635	600	490	405	400	405	420	390	340	260	...c	...c	...c	275	330	...
12	330	320	p320a	330	p315a	300	480	470	400	450	470	470	530	490	460	490	425	420	370	280	265	270	290	350	p387
13	300	290	320	310	280	280	245	240	380	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	290	310	290	...
14	300	300	305	225	315	300	250	390	375	450	500	470	425	400	420	360	370	340	280	310	280	290	300	290	344
15	320	300	340	300	325	300	250	310	390	450	420	435	430	420	380	370	330	340	260	260	260	260	280	290	334
16	270	280	270	300	330	280	260	330	390	400	390	410	400	380	325	380	350	375	330	275	280	285	310	320	330
17	330	p345a	360	380	290	300	270	250	365	460	450	p415c	380	410	440	350	375	350	280	260	280	350	330	300	347
18	p310a	320	320	290	290	300	260	420	480	530	530	450	435	430	450	430	430	370	310	285	265	290	320	300	376
19	320	360	330	310	300	320	435	580	600	p600c	570	480	470	500	500	450	440	410	270	280	280	290	310	350	406
20	310	340	360	320	320	340	270	470	500	620	p560c	500	p510a	515	510	470	450	440	390	330	300	300	315	280	405
21	280	275	280	300	300	290	250	440	500	550	...c	...c	450	...c	...c	...c	...c	370	310	270	280	340	330	290	...
22	280	260	265	265	300	280	270	400	430	460	450	p435c	420	380	410	375	370	360	260	270	260	300	310	300	338
23	280	300	310	300	300	300	250	510	520	p520a	490	350	335	390	360	325	280	300	250	270	280	300	310	350	341
24	270	270	260	270	280	290	250	330	310	340	340	400	...a	370	...a	...a	...a	360	310	290	280	280	275	240	...
25	270	260	260	250	250	260	250	240	380	360	360	365	350	360	380	375	350	320	240	280	275	280	260	270	302
26	270	270	260	260	280	275	250	250	335	360	365	360	340	350	355	335	345	325	285	270	270	280	270	265	301
27	260	260	260	270	285	260	230	230	250	380	390	390	350	...a	...a	...a	290	...a	280	310	270	330	300	260	...
28	260	260	270	260	280	280	250	270	280	340	370	340	340	350	320	310	320	310	250	255	275	300	290	280	294
29	270	240	250	250	290	300	230	260	340	360	350	365	325	360	330	320	320	330	285	310	280	280	280	265	300
30	255	280	320	...c	...c	...c	...c	220	...c	380	380	380	350	340	350	310	300	320	310	290	280	295	305	300	...
31	300	320	280	300	290	250	220	300	350	...c	...c	...c	315	300	325	340	305	340	250	280	275	260	260	260	...
MEAN*	289	294	296	293	292	288	272	335	377	425	413	402	386	389	388	374	357	336	281	277	273	288	293	296	330

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 29

DECEMBER 1938 — DECEMBER 1938

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	5.5	6.1	5.5	5.5	5.8	5.6	5.9	5.6	5.7	5.6	...
2	...	...	5.5	5.6	5.9	5.9	5.9	5.9	5.7	5.9	5.5	5.0	...
3	...	4.9	5.3	5.5	6.2	...a	...a	5.8	5.6	5.5	5.5	...	...
4	...	...	...	5.6	5.6	5.5	5.5	5.6	5.6	5.4	5.4	...	...
5	...	...	5.4	...	6.1	...c	5.9	5.5	5.7	5.6	5.5	...	...
6	...	5.1	5.4	5.6	...c	...c	6.0	6.1	...c	5.8	5.3	5.5	...
7	...	...	...	4.8	4.9	...b	5.6	6.1	6.0	5.6	5.3	5.0	...a
8	...	...	5.5	6.0	6.5	...c	5.8	6.2	...c	...c	5.6	...	...
9	...	...	...	5.9	...c	5.8	6.1	5.5	5.6	6.2	5.6	5.4	...
10	...	5.2	5.6	5.7	6.0	5.8	6.3	6.0	5.9	6.0	5.4	5.6	...
11	3.7	4.2	4.6	5.5	6.3	5.9	6.1	6.0	6.2	6.5	6.0	5.4	...
12	4.2	4.9	5.3	5.6	5.5	5.5	5.5	5.3	5.3	5.3	5.2	5.0	4.5
13	...	...	5.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
14	...	4.9	5.2	5.5	5.5	5.5	5.7	5.8	5.9	5.5	5.6	5.4	...
15	...	...	5.5	5.7	5.5	5.5	5.6	5.6	5.8	5.6	5.5	5.1	...
16	...	5.7	5.8	5.8	5.8	5.9	6.0	5.5	5.5	5.7	5.4	5.5	...
17	...	...	5.5	5.6	5.8	...c	6.0	6.1	6.0	5.5	5.5	5.0	...
18	...	4.6	5.0	5.4	5.2	5.5	5.5	5.8	5.8	5.7	5.5	5.2	...
19	6.0	4.3	4.7	...c	5.2	5.1	5.5	5.5	5.4	5.3	5.3	5.0	...
20	...	4.7	4.7	5.0	...c	...	...a	5.2	...	5.2	5.0	5.0	...
21	...	5.0	5.5	5.3	...c	...c	5.4	...c	...c	...c	...c	5.2	4.5
22	...	4.9	5.5	5.5	5.7	...c	5.8	5.6	5.6	5.5	5.4	5.1	...
23	...	4.5	4.8	...a	5.7	5.5	5.4	6.0	5.7	5.6	4.9	4.2	...
24	...	5.2	5.1	5.3	5.5	...a	...a	...a	...a	...a	...a	5.5	...
25	...	...	5.2	5.2	5.4	5.5	5.6	5.5	5.3	5.5	5.2	4.8	...
26	...	...	5.5	5.2	5.4	5.5	...a	5.4	5.5	5.4	5.2	4.7	...
27	...	...	...	5.4	5.7	...a	...a	...a	...a	...a	...a	...	...
28	...	...	...	5.5	...a	5.6	5.7	5.5	5.2	5.1	5.1	5.0	...
29	...	...	5.5	5.5	5.6	5.6	5.5	...	...	4.9	4.9	...	...
30	...	...	...c	5.3	5.5	5.3	5.4	5.3	5.2	5.1	4.9	4.8	...
31	...	4.3	5.1	...c	...c	...c	5.5	5.2	5.2	5.4	...	4.7	...
MEAN*	4.6	4.8	5.3	5.5	5.7	5.6	5.7	5.7	5.6	5.6	5.4	5.1	4.5

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	270	230	230	280	250	230	240	250	225	230	...
2	...	...	230	240	250	320	240	240	...	290	240	240	...
3	...	240	230	250	...	...a	...a	235	240	...	240	...	...
4	...	...	...	290	320	230	250	270	250	310	240	...	...
5	...	...	235	...c	220	...c	230	230	...	250	...	...	...
6	...	...	230	225	...c	...c	230	250	...c	260	230	240	...
7	...	...	...	280	...b	...b	220	220	225	260	230	240	...a
8	...	...	250	220	230	...c	...	240	...c	...c	230	...	...
9	...	...	...	230	240	220	220	220	210	225	230	230	...
10	...	250	230	220	240	240	220	270	230	230	230	240	...
11	300	260	240	...	350	240	240	230	235	230	235	240	...
12	270	260	280	230	235	230	220	220	235	250	230	250	255
13	...	...	250	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
14	...	240	225	220	230	220	210	210	230	210	225	225	...
15	...	...	270	250	220	220	210	220	190	210	230	240	...
16	...	250	250	225	220	230	215	220	205	215	220	240	...
17	...	...	250	260	210	...c	225	235	235	220	230	...a	...
18	...	235	225	215	220	260	220	250	230	250	285	...	...
19	280	240	240	...c	...	...	270	250	230	220	240	250	...
20	...	260	240	260	...c	...	...a	...	...	...	240	...	...
21	...	265	270	250	...c	...c	220	...c	...c	...c	...c	250	250
22	...	225	230	230	230	...c	250	250	240	...	220	220	...
23	...	225	250	...a	260	225	225	240	220	205	220	230	...
24	...	250	240	250	...a	...a	...a	...a	...a	...a	...a	...a	...
25	...	...	220	220	215	215	210	210	210	210	220	240	...
26	...	...	250	230	240	...a	...a	260	210	250	215	250	...
27	...	...	...	270	...a	...a	...a	...a	...a	...a	...a	...a	...
28	...	...	...	...a	...a	...a	...a	250	210	260	220	210	...
29	...	...	230	230	250	...	...	...	...	220	250	...	...
30	...	...	...c	240	215	220	210	220	...	200	250	220	...
31	...	250	220	...c	...c	...c	210	210	220	240	...	215	...
MEAN*	283	246	242	240	241	239	227	235	225	238	233	235	252

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 30

DECEMBER 1938 — IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY — DECEMBER 1938

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.8	1.1	1.2	1.1	1.7	1.7	1.9	1.8	1.3	1.1	1.0	0.8
2	...	0.8	0.8	0.9	1.0	1.0	1.2	1.0	1.3	1.0	0.9	0.9	1.0
3	...	0.6	0.9	0.8	1.7	1.9	1.7	1.7	1.7	1.3	1.3	1.1	0.7
4	...	0.8	1.0	1.1	1.1	1.7	1.7	1.9	1.1	1.7	1.0	0.8	0.8
5	...	0.8	1.0	...c	1.2	...c	1.2	2.3	1.7	0.8	1.3	1.1	0.8
6	...	1.0	1.2	0.9	...c	...c	1.8	1.8	...c	1.7	1.7	0.9	0.8
7	...	0.8	1.8	1.0	3.6	1.9	1.9	1.9	1.7	1.7	1.3	0.9	0.8
8	...	0.7	0.8	1.1	1.8	...c	1.6	1.7	...c	...c	0.9	0.8	0.8
9	...	0.8	0.8	1.2	1.2	1.7	1.7	0.9	1.7	1.7	0.9	1.1	1.0
10	...	0.8	0.8	1.5	1.7	...c	1.7	1.7	1.7	1.0	0.8	0.8	0.8
11	...	0.9	0.8	1.7	1.7	1.7	1.7	1.7	1.9	0.9	0.8	0.7	0.8
12	...	0.8	0.8	0.8	0.9	0.8	0.8	0.8	1.7	1.7	0.8	0.8	1.1
13	...	0.8	1.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
14	...	0.8	0.8	0.8	0.8	1.7	0.9	1.8	1.5	1.7	1.3	0.8	1.0
15	...	0.8	1.7	1.2	0.9	0.9	1.0	1.7	1.7	1.7	1.4	1.0	0.8
16	...	0.8	1.2	0.9	1.1	1.7	1.7	1.6	1.7	1.6	1.2	0.8	0.9
17	...	0.8	0.8	0.8	1.0	...c	0.7	1.0	1.6	1.6	1.1	0.8	0.8
18	...	0.8	0.8	1.1	1.7	1.7	1.8	1.7	1.7	1.1	1.1	1.0	0.7
19	...	0.9	0.8	...c	1.9	1.7	2.8	1.8	1.7	1.6	1.3	1.7	1.1
20	...	0.8	0.8	1.8	...c	0.9	2.1	2.0	1.9	1.8	1.2	1.8	1.0
21	...	0.8	1.0	0.9	...c	...c	1.7	...c	...c	...c	...c	0.8	0.9
22	...	1.2	1.0	1.3	1.1	...c	1.1	1.7	1.7	1.0	1.0	0.8	0.7
23	...	0.8	1.0	0.9	1.0	1.0	1.0	1.8	2.0	1.1	1.3	1.0	0.8
24	...	1.2	0.9	1.0	0.9	0.9	0.9	1.0	1.0	1.0	0.8	1.8	0.8
25	...	0.7	1.1	1.3	1.7	1.1	1.2	1.0	1.0	0.9	1.0	1.0	0.7
26	...	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	0.8	0.9	0.7
27	...	0.7	1.1	0.9	0.9	1.1	1.0	0.9	1.0	1.0	0.9	0.7	0.7
28	...	0.6	1.1	0.9	0.9	0.9	1.0	0.9	1.1	1.2	1.2	0.8	0.8
29	...	0.7	0.7	1.1	1.0	0.9	1.0	1.0	1.2	1.8	1.8	1.2	0.8
30	...	1.0	...c	1.0	1.1	1.1	1.1	1.0	1.1	1.0	1.0	0.9	0.7
31	...	0.7	0.9	...c	...c	...c	1.0	1.1	1.2	1.1	1.0	0.8	1.0
MEAN*	...	0.8	1.0	1.1	1.3	1.3	1.4	1.5	1.5	1.3	1.1	1.0	0.8

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.5	3.1	3.3	3.8	3.8	3.9	4.1	4.0	3.9	3.8	3.5	2.9	2.4
2	2.4	3.0	3.4	3.7	3.9	4.0	4.1	4.0	3.9	3.7	3.4	3.1	2.2
3	2.4	3.1	3.3	3.7	3.9	3.9	3.9	4.0	3.9	3.8	3.5	3.0	2.1
4	2.5	3.1	3.5	3.8	3.8	3.9	3.9	4.0	3.9	3.8	3.5	3.1	2.4
5	2.3	3.0	3.5	...c	3.9	...c	4.2	4.2	4.1	3.9	3.4	3.1	1.4
6	2.5	3.2	3.5	4.0	...c	...c	4.2	4.2	...c	3.8	3.6	2.9	2.3
7	2.4	3.0	4.0	3.3	...b	...b	4.1	3.9	3.5	3.9	3.8	3.1	...a
8	2.3	3.1	3.5	3.7	4.0	...c	4.1	4.0	...c	...c	3.7	2.9	2.6
9	2.7	3.4	3.6	4.1	3.9	4.1	4.2	4.1	4.0	3.8	3.6	3.2	2.5
10	2.5	3.2	3.5	3.9	4.1	4.2	4.2	4.0	3.9	3.8	3.7	3.1	2.7
11	2.5	3.1	3.5	3.8	4.0	4.0	3.9	4.2	4.1	3.9	3.6	3.1	2.5
12	2.3	3.2	3.6	3.8	4.0	4.0	3.8	3.7	3.9	4.2	3.6	3.2	2.5
13	2.6	3.1	3.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
14	2.6	2.8	3.7	3.8	4.1	4.0	3.9	3.9	3.7	3.8	3.6	3.2	2.5
15	2.6	2.9	3.4	3.9	3.9	3.9	3.9	3.7	3.8	3.9	3.6	3.2	2.5
16	2.2	2.8	3.2	3.8	4.2	4.4	4.0	4.0	4.0	4.0	3.7	3.1	2.5
17	2.4	3.0	3.5	3.8	4.0	...c	4.2	4.1	4.0	3.9	3.6	...a	2.6
18	2.5	2.9	3.4	3.8	3.8	4.0	4.0	4.1	3.9	3.8	3.6	3.2	2.4
19	2.4	3.0	3.5	...c	4.0	4.0	4.1	4.1	4.0	3.8	3.6	3.3	2.5
20	2.2	3.2	3.4	3.9	...c	4.1	4.2	4.1	4.0	3.8	3.4	3.1	2.2
21	2.6	3.2	3.4	3.8	...c	...c	4.0	...c	...c	...c	...c	3.2	2.7
22	2.5	3.2	3.5	3.8	4.0	...c	4.0	3.8	3.9	3.5	3.1	2.7	2.6
23	2.6	3.0	3.4	3.6	3.9	4.0	4.1	4.0	3.9	3.8	3.5	3.1	2.5
24	2.4	3.1	3.5	3.8	4.0	4.1	4.2	4.1	4.0	3.8	3.5	3.3	2.4
25	2.5	3.0	3.4	3.8	3.9	4.0	4.0	3.8	3.8	3.8	3.5	3.2	2.6
26	2.4	3.1	3.5	3.7	3.9	3.9	4.0	3.9	3.9	4.0	3.5	3.0	2.6
27	2.3	3.1	3.5	3.8	4.0	3.9	3.9	3.9	3.6	3.3	2.5	...a	...a
28	2.4	3.0	3.5	3.8	3.9	4.0	4.1	4.0	3.6	3.3	2.9	3.1	2.5
29	2.5	...a	3.3	3.8	3.8	4.0	3.9	3.5	3.3	4.2	...a	...a	...a
30	...c	3.0	...c	3.8	4.0	3.8	3.5	3.6	3.3	3.8	4.0	3.2	2.4
31	2.5	3.0	3.3	...c	...c	...c	4.0	4.0	3.5	3.6	3.4	3.8	2.7
MEAN*	2.4	3.1	3.5	3.8	4.0	4.0	4.0	4.0	3.8	3.8	3.5	3.1	2.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 31

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1939 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JANUARY 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.5	6.4	6.1	6.0	6.0	5.5	5.9	6.8	7.6	8.3	8.9	9.4	9.8	10.1	9.3	8.6	8.9	8.4	8.0	8.0	7.8	7.7	7.6	7.2	7.7
2	7.4	7.7	7.1	6.6	5.8	5.5	6.4	7.4	8.3	8.8	9.5	...c	...c	...c	...c	10.6	10.3	9.4	8.6	8.6	8.9	8.3	8.2	8.4	...
3	7.1	6.3	6.2	5.5	5.3	4.9	5.3	6.0	6.4	6.7	7.4	8.3	8.5	8.7	8.3	8.1	7.5	7.3	7.1	7.2	7.6	7.8	7.8	7.5	7.0
4	6.8	6.3	6.1	5.5	5.2	5.4	6.0	6.7	7.5	7.8	8.4	9.5	10.0	10.0	p10.0	9.8	9.3	8.8	8.2	8.3	8.4	8.8	8.7	8.8	p7.9
5	8.4	7.2	6.7	6.0	5.3	5.0	6.4	7.6	9.1	10.0	10.3	10.0	10.0	10.8	11.0	10.4	9.9	9.4	9.2	9.2	8.9	8.9	9.1	9.1	8.7
6	9.0	7.8	6.7	6.0	5.5	4.8	5.5	5.5	6.0	6.3	6.6	6.6	6.7	6.7	6.5	6.6	6.4	6.0	6.2	6.4	6.6	7.2	7.0	7.0	6.5
7	6.6	6.2	5.5	5.3	5.1	5.3	5.5	6.3	6.9	7.7	8.5	9.3	9.3	9.2	8.8	8.0	7.6	7.2	7.0	7.4	8.2	8.4	8.0	8.0	7.3
8	7.3	6.2	5.5	5.5	4.8	4.9	6.0	6.0	6.2	6.3	6.5	6.8	7.0	7.0	6.4	7.5	7.0	6.7	6.8	6.3	6.7	7.2	7.3	7.2	6.5
9	6.3	5.5	5.2	5.1	4.8	4.6	5.5	6.6	7.9	9.3	10.5	11.0	11.5	11.3	10.0	8.6	7.5	7.2	6.8	7.2	7.6	7.8	7.5	6.3	7.6
10	6.2	5.8	5.7	5.3	4.9	4.4	5.2	5.4	6.4	6.5	7.2	8.4	9.6	9.3	8.5	8.6	7.5	6.9	7.0	6.5	6.9	7.3	7.2	8.0	6.9
11	7.5	6.8	6.1	5.0	4.2	4.0	5.3	6.6	7.0	7.7	7.0	8.4	10.0	9.4	8.8	8.0	7.4	7.0	6.7	6.7	p7.0c	p7.5c	7.9	8.0	p7.1
12	7.4	5.8	5.3	4.7	4.3	4.0	4.9	6.5	7.0	8.3	8.4	9.1	11.0	11.2	10.9	10.4	9.3	8.4	8.0	7.8	7.7	7.8	7.6	7.8	7.6
13	7.9	6.8	5.5	5.4	4.7	4.7	6.2	7.3	7.8	8.7	9.3	9.3	9.5	10.5	10.2	9.5	8.6	8.0	7.8	7.6	7.0	7.3	7.1	7.3	7.7
14	7.1	6.2	5.7	5.5	4.7	4.4	6.2	7.3	p8.2c	9.2	9.7	10.0	10.5	10.5	9.7	9.3	8.3	8.1	7.8	7.5	7.8	8.0	8.1	7.5	p7.8
15	7.5	6.5	5.9	4.8	4.5	4.2	5.1	6.3	7.8	8.5	9.2	9.0	8.8	9.2	9.3	9.5	8.9	8.3	7.9	7.9	8.0	8.2	8.4	8.7	7.6
16	7.4	6.9	6.2	5.8	5.2	4.8	5.5	6.6	7.0	7.8	7.8	8.2	8.4	8.0	7.6	7.3	7.0	6.9	7.0	7.0	7.3	7.8	7.9	7.7	7.0
17	7.3	5.7	5.5	5.1	4.6	4.3	5.5	6.0	6.8	7.5	7.6	8.4	10.0	10.2	10.0	8.6	7.7	7.3	7.0	7.4	7.3	8.0	8.0	8.2	7.2
18	6.5	5.5	4.8	4.8	4.5	4.2	5.5	6.2	6.9	7.1	7.5	7.9	8.7	9.7	9.6	8.9	8.4	8.1	7.5	7.2	7.4	7.4	7.1	7.1	7.0
19	7.2	6.6	5.9	5.3	4.5	4.4	5.9	7.2	9.0	10.2	10.1	10.2	9.5	9.2	9.7	9.9	9.2	8.4	7.2	7.0	7.3	6.9	7.0	6.5	7.7
20	6.9	6.0	5.5	5.0	4.6	4.5	5.9	7.3	8.8	9.4	9.3	9.4	9.5	10.1	9.8	10.0	9.3	8.0	7.8	7.7	7.9	7.8	7.4	6.9	7.7
21	6.8	6.0	5.8	5.1	4.4	4.3	5.5	6.9	8.0	8.3	8.3	9.1	9.5	10.0	9.8	9.6	8.8	8.0	7.9	8.4	8.4	8.3	8.5	7.6	7.6
22	7.5	7.1	6.0	5.5	5.3	4.9	5.5	6.5	7.9	9.4	9.9	10.2	10.2	10.0	9.3	9.1	8.6	8.6	8.4	8.2	8.3	8.2	7.8	7.1	7.9
23	7.0	6.2	6.0	5.1	4.2	4.2	5.5	7.3	7.5	8.2	9.5	10.4	10.4	9.7	9.3	9.0	9.0	7.8	7.5	7.6	7.5	7.0	7.4	7.0	7.5
24	7.0	6.1	5.7	5.5	4.7	4.5	5.3	6.0	6.6	7.1	7.3	8.4	8.7	9.4	8.6	8.3	8.2	7.8	7.0	6.9	7.2	7.0	7.0	6.8	7.0
25	6.5	5.9	5.5	4.6	3.7	3.6	5.8	7.4	8.0	9.2	10.5	10.5	10.5	9.9	9.4	9.2	9.2	8.4	7.1	7.0	7.5	7.4	7.2	7.3	7.6
26	7.1	6.4	5.5	4.9	4.6	4.3	5.5	7.4	8.0	9.1	10.0	10.1	9.5	p9.5c	p9.5c	9.6	9.0	8.9	...a	7.4	7.8	7.5	7.8	8.2	...
27	8.4	6.9	5.2	4.7	4.0	3.8	5.3	6.9	8.0	9.0	9.8	10.0	10.3	10.2	10.0	9.8	9.2	8.2	7.5	7.5	7.8	8.0	8.4	8.4	7.8
28	7.4	7.0	5.9	5.5	5.5	5.1	6.5	7.3	8.4	9.3	10.2	10.9	10.6	10.9	10.5	10.0	9.5	9.0	8.5	8.2	8.3	7.8	8.0	8.0	8.3
29	7.9	6.6	6.5	6.0	5.8	5.8	6.2	7.5	7.8	8.3	9.9	10.8	10.7	10.6	9.9	9.5	9.7	8.1	8.3	8.2	8.2	8.0	8.0	8.1	8.2
30	7.9	7.6	6.5	5.5	5.3	4.6	5.9	6.8	7.2	8.0	8.6	8.9	8.6	8.6	8.9	8.4	8.0	7.3	7.3	7.4	7.4	7.1	7.0	7.0	7.3
31	6.6	6.3	5.7	5.4	5.4	5.3	6.7	7.8	8.5	8.8	9.5	9.9	10.0	9.8	8.8	9.5	9.2	8.7	8.4	8.4	8.3	8.2	7.6	8.0	8.0
*MEAN	7.2	6.5	5.8	5.4	4.9	4.6	5.7	6.8	7.5	8.3	8.8	9.3	9.6	9.7	9.2	9.0	8.5	8.0	7.6	7.6	7.7	7.8	7.7	7.6	7.5

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d=BEYOND UPPER LIMIT OF RECORDER e=BELOW LOWER LIMIT OF RECORDER f=SPREAD ECHOES PRESENT g= f^0F2 EQUAL TO OR LESS THAN f^0F1 h=STRATIFICATION OBSERVED
j=ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K=IONOSPHERIC STORM IN PROGRESS p=INTERPOLATED VALUE q=DOUBTFUL VALUE

TABLE 32

IONOSPHERIC RÉSULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JANUARY 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	270	255	260	280	260	260	340	370	380	350	350	360	350	360	375	330	300	260	260	270	280	290	300	307
2	315	270	275	260	240	275	250	250	240	350	300	...c	...c	...c	...c	315	315	320	235	280	250	275	290	275	...
3	255	270	280	285	280	290	235	410	500	460	390	430	380	360	370	350	350	330	360	275	280	280	280	270	332
4	275	250	260	260	260	280	250	230	330	420	380	360	375	360	p350c	335	320	310	280	280	275	280	285	280	p304
5	270	250	275	260	250	280	250	230	330	320	330	360	400	365	350	330	345	315	340	290	265	285	290	290	303
6	265	260	230	270	275	290	240	250	520	430	430	500	480	450	480	450	420	420	330	270	265	260	240	235	344
7	230	230	250	250	260	260	230	365	460	390	400	370	350	360	360	355	350	340	320	260	280	290	300	230	312
8	220	210	250	230	220	240	210	430	430	400	430	480	400	425	460	360	375	390	280	250	270	290	310	300	328
9	250	240	230	250	260	280	225	420	380	325	300	350	330	340	315	340	370	220	220	275	260	280	280	280	292
10	275	275	275	260	270	290	250	240	400	515	440	420	390	380	400	350	390	420	270	280	290	330	290	270	332
11	250	270	260	250	270	320	250	380	390	365	415	405	365	375	390	415	390	360	260	315	p315c	p315c	315	270	p330
12	240	230	270	280	280	320	260	370	390	350	350	360	380	350	365	325	340	330	240	260	280	280	280	290	309
13	260	250	230	250	240	280	260	230	350	355	355	385	410	380	350	340	350	370	290	280	280	290	300	290	307
14	260	260	280	280	250	260	250	230	p240c	350	380	365	355	330	360	350	375	370	260	270	270	280	280	280	p299
15	270	260	250	300	290	300	260	400	340	300	350	350	400	390	400	370	370	365	240	260	270	310	300	260	317
16	250	260	240	250	280	310	240	320	400	350	400	380	360	400	410	400	390	420	285	275	290	270	280	265	322
17	240	240	270	260	280	310	265	380	400	380	450	450	380	370	330	350	380	300	250	250	320	290	275	240	319
18	240	225	280	290	310	310	280	350	350	380	350	430	400	360	340	340	360	320	250	265	280	280	280	320	316
19	260	260	260	250	280	280	240	225	320	300	330	340	350	350	355	310	305	290	235	270	255	280	280	290	288
20	250	250	270	250	280	280	260	280	290	325	300	380	410	360	360	320	315	280	260	260	280	280	270	280	295
21	280	260	265	280	310	310	240	230	320	315	380	390	380	340	330	330	315	325	250	270	300	290	260	270	302
22	270	250	270	280	280	290	250	...a	...a	...a	...a	...a	340	340	340	350	335	310	260	280	260	290	280	320	...
23	280	300	280	230	300	280	260	260	300	340	360	330	315	350	350	335	325	280	270	260	280	280	280	270	296
24	260	250	265	250	260	300	280	340	360	360	370	360	360	360	360	345	325	310	250	250	240	280	290	280	304
25	260	260	260	260	280	300	260	240	230	335	300	325	315	380	340	350	325	280	250	270	300	280	280	280	290
26	280	265	270	240	280	270	250	250	320	320	300	300	340	...c	...c	330	310	350	...a	260	280	320	280	280	...
27	240	230	230	250	275	280	260	240	310	335	340	335	330	330	350	340	310	300	240	280	280	280	280	250	287
28	250	240	230	270	260	270	240	240	250	310	320	310	320	320	330	340	320	300	250	260	280	280	280	270	281
29	260	270	260	280	270	260	250	240	230	330	340	325	335	340	335	350	300	290	250	250	270	270	280	280	286
30	275	250	240	250	270	300	250	250	320	350	350	340	370	380	380	340	340	290	230	280	300	280	280	270	299
31	275	260	260	260	280	280	260	240	310	350	300	310	330	360	340	330	320	300	330	320	360	370	360	360	311
MEAN*	260	254	259	261	272	286	250	295	350	360	360	372	367	364	365	349	344	326	268	271	279	288	286	279	307

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 33

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1939 JANUARY 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.8	5.1	5.5	5.3	5.5	5.5	5.5	5.2	5.3	5.1	4.8	...
2	...	...	...	5.3	5.4	...c	...c	...c	...c	5.1	5.1	4.8	...
3	...	4.8	4.8	5.0	5.3	5.6	5.4	5.3	5.3	4.8	5.1	4.8	4.6
4	...	...	4.8	6.1	5.5	5.5	5.5	5.5	...c	5.5	5.1	5.0	...
5	...	...	5.5	5.1	5.7	5.8	5.2	5.5	5.5	5.2	5.5	4.9	4.5
6	...	...	4.8	5.0	5.1	5.2	5.3	5.2	5.1	5.1	5.0	4.9	4.1
7	...	4.7	4.9	5.1	5.3	5.5	5.5	5.5	5.5	5.3	5.1	4.9	...
8	...	5.0	4.6	4.9	5.1	5.2	5.4	5.4	5.5	5.2	5.4	5.2	4.5
9	...	5.1	5.1	5.3	5.5	5.7	5.4	5.5	5.4	5.5	5.2	...	...
10	...	...	4.8	5.4	5.2	5.3	5.4	5.2	5.3	5.3	5.4	5.0	...
11	...	4.6	5.0	5.0	5.3	5.3	5.5	5.5	5.3	4.8	5.3	4.8	...
12	...	4.4	5.0	5.3	5.5	5.5	6.0	5.5	5.8	5.4	5.5	5.0	...
13	...	...	5.1	5.5	5.5	5.0	5.5	5.5	5.4	5.4	5.2	5.1	...
14	...	...	...c	5.6	5.8	5.2	5.4	5.5	5.2	5.4	5.5	5.2	...
15	...	4.8	5.1	5.2	5.5	5.5	6.0	5.8	5.0	5.4	5.5	5.4	...
16	...	4.5	5.0	5.1	5.3	5.3	5.3	5.5	5.2	5.2	5.2	5.1	3.6
17	...	4.7	4.9	5.1	5.5	5.3	5.5	5.4	5.4	5.2	5.3	4.6	...
18	...	4.4	5.2	5.3	5.2	5.9	5.4	5.4	5.3	5.2	5.1	5.0	...
19	...	...	5.1	5.0	5.5	5.6	5.5	5.2	5.4	5.0	5.0	4.6	...
20	...	...	4.6	5.1	5.1	5.6	5.1	5.5	5.6	5.2	4.8	4.5	...
21	...	...	4.8	4.5	5.4	5.5	5.6	5.3	5.3	5.2	5.0	4.9	...
22	...	...	...	...	...	...	5.3	5.5	5.0	5.3	5.1	4.3	...
23	...	...	4.9	5.1	5.2	5.3	5.5	5.6	5.5	5.2	5.1	4.3	...
24	...	4.3	4.7	5.0	5.1	5.1	5.2	5.4	5.2	5.1	4.7	4.6	...
25	...	...	...	5.2	5.5	5.5	5.3	5.4	5.2	5.4	5.1	4.1	...
26	...	...	5.1	5.2	5.3	5.4	5.3	...c	...c	5.2	5.1	5.1	...
27	...	...	5.1	5.5	5.6	5.5	5.5	5.5	5.5	5.4	5.1	...	...
28	...	...	...	5.4	5.4	5.5	5.5	5.5	5.3	5.3	5.1	4.4	...
29	...	...	...	5.2	5.5	5.4	5.4	5.5	5.4	5.5	5.2	4.8	...
30	...	...	5.2	5.2	5.5	5.5	5.5	5.4	5.5	5.1	5.1	4.5	...
31	...	...	5.1	5.6	5.3	5.3	5.4	5.9	5.7	5.3	5.3	4.4	...
* MEAN	...	4.7	5.0	5.2	5.4	5.4	5.4	5.5	5.4	5.2	5.2	4.8	4.3

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	250	250	260	225	215	215	200	215	250	225	230	...
2	...	...	...	210	210	...c	...c	...c	...c	220	240	220	...
3	...	225	210	220	240	210	220	215	215	200	215	220	225
4	...	...	230	210	200	210	210	220	...c	215	215	230	...
5	...	...	215	240	210	220	210	205	210	210	220	240	250
6	...	...	240	220	220	190	205	220	220	220	220	230	210
7	...	220	210	180	180	170	220	220	210	215	210	225	...
8	...	200	190	...	...	200	200	220	210	240	205	210	200
9	...	210	180	180	170	160	210	210	205	205	210	...	...
10	...	...	240	...	...	260	225	220	300	250	220	230	...
11	...	240	235	200	210	200	225	215	200	200	200	220	...
12	...	260	250	240	240	210	230	...	230	220	210	210	...
13	...	...	220	210	215	205	220	220	215	215	200	220	...
14	...	...	...c	235	210	200	215	200	200	210	220	...a	...
15	...	260	230	190	220	210	210	210	220	240	210	230	...
16	...	220	250	230	205	200	210	220	220	240	205	200	235
17	...	220	215	210	225	215	215	220	215	210	210	220	...
18	...	250	215	215	220	215	210	260	250	200	220	220	...
19	...	...	205	210	200	215	240	210	210	210	215	230	...
20	...	...	225	220	215	200	190	250	260	250	250	240	...
21	...	...	215	200	210	200	230	215	225	220	230	230	...
22	...	...	...	...	...	...	230	240	220	240	...	...	...
23	...	...	225	210	210	200	190	210	200	220	230	230	...
24	...	250	220	240	210	200	200	230	250	240	225	225	...
25	...	...	...	215	230	220	220	250	210	230	220	240	...
26	...	...	220	220	215	210	200	...c	...c	230	220	250	...
27	...	...	230	230	210	200	200	200	210	220	210	...	...
28	...	...	...	230	220	220	210	200	190	210	220	215	...
29	...	...	...	220	215	220	220	210	205	220	210	220	...
30	...	...	230	220	230	220	210	210	220	230	240	250	...
31	...	...	230	210	230	210	210	230	190	220	230	230	...
* MEAN	...	234	223	217	214	207	213	219	219	223	218	226	224

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 34

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1939 | JANUARY 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.9	1.0	1.1	1.1	1.3	1.8	1.7	1.1	1.0	0.9	0.7	0.7	1.3	2.0	3.5	4.0	4.0	4.0	3.8	4.0	3.8	3.8	3.4	3.0	2.6
2	...	0.6	1.0	0.9	0.9	...c	...c	...c	...c	1.0	1.0	0.8	0.8	2.4	3.0	3.2	3.6	3.9	...c	...c	...c	...c	3.9	3.5	3.0	2.3
3	...	1.0	1.1	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.7	2.3	2.9	3.3	3.7	3.8	3.9	3.8	4.0	3.9	3.7	3.3	3.1	2.5
4	...	0.7	0.9	1.0	1.0	1.8	1.7	1.0	...	0.9	0.9	0.8	0.7	2.3	3.0	3.2	3.8	4.0	3.3	4.0	4.2	p4.0c	3.8	3.5	3.1	2.5
5	...	0.7	1.0	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	1.6	2.8	3.3	3.5	4.0	4.0	4.0	4.1	4.0	4.0	3.6	3.1	2.7
6	...	0.8	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	1.1	2.4	3.0	3.7	3.9	4.1	4.1	4.1	4.3	4.1	3.8	3.6	3.1	2.7
7	...	0.8	0.9	1.0	1.2	0.9	0.9	0.9	1.1	1.0	0.8	0.7	0.7	2.1	3.0	3.3	3.6	3.8	4.2	4.2	4.2	4.0	3.9	3.5	3.1	2.4
8	...	0.7	0.8	0.9	1.0	1.1	...	1.2	...	1.0	0.8	1.8	0.9	2.2	3.0	3.3	3.6	3.4	4.6	p4.5c	4.3	4.2	4.0	3.6	3.3	2.7
9	...	0.8	0.9	1.0	1.2	1.0	0.9	1.0	1.0	1.1	1.0	0.8	0.8	2.3	3.0	3.3	3.6	4.4	4.1	4.1	4.1	4.0	3.9	3.6	3.2	2.5
10	...	0.8	1.0	1.0	1.1	1.0	1.1	2.2	1.1	1.2	1.1	1.0	0.8	2.4	2.9	3.5	3.7	3.8	3.8	4.2	4.3	4.0	4.0	3.5	3.3	2.6
11	...	0.8	0.9	0.8	0.8	0.8	1.0	1.0	1.0	0.9	1.0	1.0	...	2.3	2.9	3.3	3.8	4.0	4.1	4.2	4.1	4.1	3.8	3.6	3.3	2.4
12	...	0.6	1.0	0.9	1.8	1.2	1.1	1.9	1.2	1.3	1.0	0.7	0.6	2.2	2.9	3.3	3.7	4.0	3.9	3.9	4.0	4.2	3.9	3.6	3.2	2.6
13	...	1.1	1.0	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.0	0.8	0.6	2.3	2.9	3.2	3.2	3.8	3.7	3.3	4.1	4.0	3.8	3.5	3.2	2.0
14	...	0.9	...c	1.1	1.1	1.1	1.3	1.0	1.0	1.1	1.0	0.7	0.7	2.2	2.8	p3.3c	3.7	3.9	4.1	4.1	4.2	4.0	3.9	3.4	p3.0a	2.7
15	...	0.8	0.8	...c	1.1	1.8	2.0	1.9	1.1	1.0	0.9	1.0	0.9	2.6	3.1	3.3	3.7	3.9	4.2	4.0	4.2	4.0	3.9	3.5	3.0	2.7
16	...	0.8	1.0	0.9	1.2	1.5	1.1	1.2	1.2	1.1	1.0	1.0	0.9	2.1	2.9	3.4	3.6	4.0	4.0	4.0	4.3	3.8	3.9	3.5	3.1	2.7
17	...	1.0	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.0	1.0	0.8	0.6	2.3	2.8	3.2	3.7	3.7	4.0	4.0	4.1	3.9	3.7	3.5	3.2	2.6
18	...	0.7	0.8	1.1	1.3	1.4	1.2	1.1	1.0	0.9	0.8	0.7	0.8	2.1	3.1	3.3	3.5	3.5	3.6	3.6	p3.8a	4.0	3.6	3.4	3.0	2.5
19	...	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.0	0.8	0.9	0.6	2.2	2.9	3.3	4.0	3.8	4.0	4.1	4.0	3.9	3.6	3.5	3.2	2.5
20	...	0.8	0.8	0.8	0.9	1.0	0.8	1.1	1.1	1.0	0.8	0.8	0.7	2.2	2.8	3.2	3.5	4.0	4.0	3.9	3.9	4.0	3.7	3.4	3.1	2.2
21	...	0.8	0.6	0.8	0.9	0.9	0.9	1.1	1.1	1.1	0.9	0.9	0.9	2.1	2.9	3.3	3.4	3.6	3.9	4.0	3.8	3.7	3.6	3.6	3.2	2.7
22	...	0.6	0.7	0.9	1.0	1.1	1.0	1.0	1.0	1.1	1.0	0.9	1.2	2.0	2.8	3.3	3.5	3.6	3.3	4.1	4.0	3.9	3.8	3.7	3.3	2.4
23	...	0.8	0.8	0.8	0.8	0.9	1.0	1.0	1.0	0.8	1.0	0.8	0.6	2.0	2.8	3.3	3.5	3.3	3.9	4.0	4.0	4.0	3.9	3.6	3.2	2.6
24	...	0.6	1.0	0.9	0.9	1.0	1.0	1.0	1.4	1.0	1.0	1.0	0.8	1.9	2.7	3.2	3.5	3.8	4.0	4.1	4.0	3.9	3.7	3.6	3.2	2.6
25	...	0.8	1.0	1.0	1.1	1.1	0.9	0.9	1.5	1.0	1.0	0.8	0.7	2.4	2.9	3.3	3.7	3.8	3.9	3.9	3.9	3.7	3.5	3.5	2.9	2.6
26	...	0.8	1.0	0.7	0.9	0.9	...c	...c	...c	1.0	1.7	1.1	1.7	2.3	3.0	3.3	3.5	3.6	3.8	4.1	p4.0c	p4.0c	3.9	3.7	3.1	2.4
27	...	0.8	1.0	1.0	1.0	1.1	1.8	1.1	1.1	1.0	1.0	0.8	0.8	2.0	2.8	3.6	3.7	4.1	3.9	3.8	4.2	4.2	3.8	3.6	p3.1a	2.5
28	...	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.8	0.9	0.8	2.4	2.9	3.3	3.6	3.8	3.8	4.0	4.1	3.9	3.8	3.7	3.2	2.5
29	...	1.0	0.9	1.2	1.0	1.0	1.1	1.1	0.9	1.1	1.0	0.8	0.7	1.8	2.8	3.4	3.7	3.8	3.9	3.9	4.0	4.0	4.0	3.5	3.2	2.6
30	...	0.6	0.8	0.8	0.7	0.9	0.8	1.0	1.0	1.0	0.9	0.7	0.8	2.2	2.7	3.3	3.4	3.7	3.5	3.9	4.2	4.0	4.0	3.6	3.2	2.5
31	...	0.8	1.0	1.1	1.2	1.2	...c	...c	1.2	...c	1.0	...c	0.8	2.1	2.8	3.3	3.5	3.7	3.8	4.0	4.0	4.0	3.7	3.5	3.1	2.2
MEAN*	...	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.1	1.0	1.0	0.9	0.8	2.2	2.9	3.3	3.6	3.8	3.9	4.0	4.1	4.0	3.8	3.5	3.1	2.5

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

FEBRUARY 1939

TABLE 35

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1939

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	7.3	6.7	6.2	5.7	5.5	5.4	5.5	6.9	8.2	9.4	10.0	10.7	10.1	10.2	p10.0c	p9.8c	9.6	9.1	8.7	8.6	8.8	8.4	7.9	7.9	8.2
2	7.7	7.7	7.1	5.5	4.8	4.9	5.0	7.2	7.3	7.6	7.8	9.0	9.0	9.0	7.6	7.5	7.7	7.7	7.3	6.7	6.5	6.3	6.3	5.8	7.0
3	5.5	5.1	4.2	3.9	3.8	3.7	4.8	5.4	5.5	7.0	8.2	8.4	8.2	8.7	9.2	9.5	9.2	8.4	7.7	7.8	8.6	8.3	7.9	7.5	6.9
4	7.1	5.3	4.8	4.3	4.1	3.4	4.3	4.7	5.4	5.5	6.0	6.4	6.1	6.2	6.1	6.0	6.0	6.0	5.7	6.0	6.0	6.3	6.3	6.3	5.6
5	6.0	5.1	4.1	3.6	3.8	3.0	4.2	5.7	6.4	6.6	7.0	7.5	7.4	7.3	7.6	7.6	7.1	7.0	6.7	6.7	7.3	7.1	7.0	6.5	6.2
6	6.7	6.0	5.1	5.0	4.8	4.7	5.3	6.1	6.8	6.9	7.1	7.3	7.5	8.5	8.4	p8.0c	p7.5c	6.8	6.6	5.9	6.5	7.3	7.2	7.0	6.6
7	6.4	5.5	4.7	3.8	3.6	3.3	3.9	4.7	5.2	5.8	7.3	8.2	8.7	8.6	8.0	7.7	7.0	6.5	6.2	6.0	5.8	5.8	5.5	5.4	6.0
8	5.6	5.0	4.6	4.1	3.9	4.0	4.7	6.2	7.0	8.0	8.8	9.2	9.5	8.9	8.0	7.5	7.1	6.7	6.6	6.4	5.9	5.8	5.6	5.6	6.4
9	5.5	5.5	4.8	4.3	4.0	3.8	5.3	6.0	6.6	7.7	9.1	9.4	10.0	9.9	9.1	9.1	8.8	8.6	8.2	7.6	7.1	7.2	7.0	7.0	7.2
10	7.1	7.0	5.0	4.1	4.2	3.8	4.8	6.4	7.0	7.6	8.4	8.7	9.0	10.0	10.2	8.8	7.8	7.5	7.2	7.0	7.0	6.9	6.4	6.0	7.0
11	6.0	5.5	5.2	5.0	5.3	5.6	6.9	7.5	8.1	8.7	10.5	10.8	11.1	11.5	11.5	10.2	9.3	9.0	8.4	8.4	8.1	7.7	6.9	6.8	8.1
12	6.3	6.1	5.5	4.9	4.7	4.4	5.2	7.1	8.4	9.0	9.4	9.5	10.3	10.4	10.0	9.7	9.5	9.3	9.3	9.4	8.8	8.0	7.7	7.0	7.9
13	6.5	6.3	6.0	5.4	5.2	5.3	6.1	7.8	8.7	9.5	10.5	10.8	10.5	10.5	10.5	10.3	10.3	10.1	10.0	9.9	9.2	8.2	7.9	7.6	8.5
14	7.2	7.0	6.8	5.9	5.5	5.1	5.4	6.8	8.4	9.0	9.3	9.5	9.5	10.3	9.7	10.2	9.7	10.0	9.8	9.4	9.0	7.9	7.4	6.9	8.2
15	6.5	6.9	6.6	6.2	5.7	5.8	5.8	6.1	6.5	6.8	7.0	7.3	8.1	8.5	8.2	8.0	7.5	7.7	8.0	8.3	8.5	8.0	6.9	6.3	7.1
16	5.9	5.9	5.5	5.3	5.1	5.0	4.8	5.9	6.9	7.6	8.0	7.8	8.4	8.3	9.2	9.5	8.8	8.8	8.6	8.3	8.0	7.4	6.8	6.7	7.2
17	6.5	6.3	5.9	5.3	4.7	4.5	4.5	5.5	6.6	7.8	9.0	9.4	9.0	9.5	10.0	9.6	9.5	9.7	9.2	9.6	9.4	7.5	7.1	6.6	7.6
18	6.2	6.4	6.0	3.9	3.0	3.0	4.2	5.5	6.8	8.2	8.7	9.3	10.0	9.9	9.4	9.8	9.2	9.5	9.1	9.2	8.2	7.2	6.3	6.2	7.3
19	6.0	5.8	5.8	5.2	4.9	4.5	5.3	6.5	7.5	8.4	9.8	10.0	10.3	10.0	9.9	10.8	9.8	10.3	9.9	9.5	8.3	7.1	6.2	5.8	7.8
20	5.9	6.1	5.9	4.7	4.1	3.7	4.8	6.2	7.7	9.3	9.5	8.9	9.2	9.6	9.4	9.0	8.7	8.7	8.7	8.8	7.8	6.8	6.2	5.9	7.3
21	5.7	5.7	5.5	5.3	5.0	4.6	5.4	6.6	7.9	9.5	9.3	9.6	10.0	10.2	10.0	9.6	9.4	9.0	9.1	9.2	8.4	7.8	7.3	6.8	7.8
22	6.4	6.0	5.5	5.0	4.8	4.7	5.7	7.2	8.6	9.0	8.9	9.8	10.0	10.2	10.1	10.4	10.4	10.3	10.4	9.9	7.9	7.0	6.4	6.6	8.0
23	6.6	6.7	5.6	5.0	5.0	4.7	5.5	6.7	7.0	7.3	8.2	9.5	10.0	9.8	9.7	9.4	8.7	8.5	8.9	8.8	8.0	7.9	7.2	6.7	7.6
24	6.4	6.0	5.5	5.6	5.6	5.3	6.1	8.4	8.4	9.7	10.2	11.0	11.7	11.8	11.7	11.0	10.3	9.3	9.7	p9.2c	8.7	8.2	7.9	7.5	8.6
25	7.4	6.3	5.8	5.0	3.6	2.8	3.4	3.3	3.9	4.3	4.4	4.5	4.6	4.7	4.6	4.6	4.3	5.2	5.0	4.7	3.8	4.2	4.1	4.1	4.5
26	3.7	3.3	2.5	1.8	1.3	1.3	3.7	5.7	6.5	7.5	7.6	7.5	7.8	7.4	7.3	7.3	7.0	7.3	7.2	6.8	6.8	6.4	6.1	5.7	5.6
27	5.6	5.3	5.0	4.7	4.4	4.0	5.0	6.6	7.2	8.2	9.1	9.7	10.2	10.3	10.2	10.3	10.0	9.9	10.0	10.0	8.5	7.4	6.9	6.3	7.7
28	6.4	6.4	5.9	5.1	4.7	4.5	5.5	7.4	8.2	8.9	9.3	9.4	9.8	10.1	10.0	10.3	10.1	9.9	10.0	9.9	8.5	8.0	7.6	7.3	8.0
29																									
30																									
31																									
MEAN*	6.3	6.0	5.4	4.8	4.5	4.2	5.0	6.3	7.1	7.9	8.5	8.9	9.1	9.3	9.1	9.0	8.6	8.5	8.3	8.1	7.7	7.2	6.8	6.5	7.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 36

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1939

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	280	280	270	275	290	290	260	250	320	320	320	325	340	350	p340c	p320c	300	300	240	260	260	275	275	280	p292
2	280	270	250	270	p300c	320	280	320	300	350	370	365	370	350	340	410	345	300	250	260	290	280	300	300	p311
3	290	280	p320a	350	320	340	310	400	500	370	360	370	420	400	390	320	320	240	250	265	270	270	260	270	p329
4	225	240	280	320	400	380	470	480	450	460	520	450	485	510	450	510	500	400	265	280	290	300	290	290	385
5	270	250	290	280	305	340	380	400	390	450	430	400	420	425	410	385	370	350	250	275	270	270	280	280	340
6	270	260	270	320	300	315	280	380	340	400	400	430	420	350	380	p370c	p350c	340	250	280	290	320	330	320	p332
7	300	290	330	330	340	365	310	290	550	580	450	375	380	320	350	350	350	310	280	275	290	290	305	300	346
8	270	230	260	300	320	320	360	300	360	310	310	360	370	340	330	360	330	320	230	250	260	280	310	320	308
9	280	260	p265a	270	270	310	250	240	330	340	320	320	320	330	350	310	310	300	250	240	250	280	300	290	p291
10	270	250	240	260	290	330	260	220	280	300	350	340	280	340	300	300	330	240	280	260	250	275	280	290	284
11	280	330	280	280	280	270	240	235	230	345	310	330	350	345	320	300	345	250	250	260	250	250	265	260	286
12	275	260	260	260	270	280	260	240	240	280	320	280	300	310	290	330	320	230	240	250	230	240	250	260	270
13	270	260	260	250	240	250	220	220	230	300	300	300	300	320	320	310	300	300	255	250	240	240	260	270	269
14	270	280	260	250	260	275	250	240	275	300	300	310	330	320	350	310	320	240	250	250	240	260	250	250	277
15	290	290	280	270	340	280	260	300	340	375	385	405	380	370	370	315	330	315	270	285	270	260	260	260	312
16	320	320	320	320	310	300	280	350	340	330	330	340	350	380	350	330	300	300	260	270	250	240	290	340	313
17	330	290	270	270	270	300	280	350	340	330	290	290	310	330	310	300	315	280	p250a	p250a	250	250	275	300	p293
18	335	290	260	250	p275a	300	275	250	300	285	305	315	320	300	320	330	310	280	230	235	230	240	280	280	p283
19	280	265	260	240	250	240	250	240	310	300	290	300	280	320	320	305	310	275	250	250	225	235	275	290	273
20	290	280	260	220	275	300	260	245	300	280	280	300	330	320	315	310	295	280	250	235	235	240	270	280	277
21	280	285	280	270	260	260	250	240	290	285	280	300	315	310	310	270	300	270	260	240	250	270	270	250	275
22	250	250	250	240	275	255	260	245	260	275	320	300	310	300	320	315	310	290	260	235	210	235	280	280	272
23	300	280	240	255	260	275	240	250	280	330	310	325	305	320	315	325	310	240	260	240	240	250	240	260	277
24	270	260	290	280	275	280	270	250	225	300	315	320	315	320	315	305	280	270	250	240	240	255	265	270	278
25	270	280	300	320	385	500	380	310	300	270	240	230	210	240	250	230	240	510	315	270	340	305	340	335	307
26	320	290	270	360	350	340	280	250	270	310	330	340	360	410	395	370	360	340	250	250	240	250	260	270	311
27	270	275	260	265	240	250	255	235	230	320	320	315	340	300	340	320	250	240	245	235	230	240	260	280	271
28	280	250	240	230	270	270	240	240	230	280	300	310	330	360	340	350	320	280	250	235	225	225	270	240	274
29																									
30																									
31																									
MEAN*	283	273	270	279	294	305	282	285	315	335	334	334	341	342	339	330	321	296	255	255	254	262	278	283	298

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 37

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1939 FEBRUARY 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.5	5.3	5.6	5.3	5.7	5.7	...c	...c	...	...	...
2	...	4.8	4.7	5.1	5.8	5.4	5.5	5.8	5.7	5.6	5.2	4.5	...
3	3.1	4.3	4.9	5.2	5.5	5.5	6.2	5.8	5.7	5.5	5.5	...	...
4	3.2	3.9	4.4	4.7	5.0	5.0	5.1	5.1	5.1	5.2	5.3	4.7	...
5	3.3	4.6	4.7	5.0	5.0	5.1	5.2	5.5	4.9	5.2	5.1	5.5	...
6	...	4.6	4.7	5.1	5.2	5.4	5.1	5.3	...c	...c	...c	4.8	...
7	...	...	4.5	4.9	5.6	6.0	5.6	5.5	5.4	5.4	4.8	4.5	...
8	3.3	4.2	5.5	5.2	5.3	5.5	5.4	5.3	5.3	5.0	5.0	4.6	...
9	...	...	5.0	5.1	5.3	5.5	5.4	5.5	5.7	5.3	5.0	5.6	...
10	...	...	4.3	5.2	5.5	5.4	5.6	5.5	5.2	5.1	5.6	...	...
11	...	...	...	5.5	5.2	5.6	6.0	5.5	5.3	5.1	5.4	...	...
12	...	...	...	5.1	5.2	4.9	5.1	5.1	5.2	5.6	5.4	...	...
13	...	...	...	5.3	5.5	5.3	5.4	5.5	5.6	5.2	5.0	4.7	...
14	...	...	4.4	5.1	5.3	5.8	5.6	5.5	5.8	5.2	5.3	...	...
15	...	4.0	4.5	4.8	4.9	5.0	5.2	5.4	5.5	5.0	4.8	4.6	...
16	...	4.0	4.4	4.8	5.0	5.1	5.2	5.5	5.4	5.1	4.8	4.7	...
17	...	4.0	4.5	4.8	5.1	5.1	5.3	5.5	...a	...a	4.8	4.2	...
18	...	...	4.5	4.7	5.1	5.2	5.5	5.2	5.3	5.1	4.7	4.1	...
19	...	...	4.6	5.0	5.2	5.2	4.8	5.5	5.4	5.1	4.8	4.1	...
20	...	...	4.7	5.0	5.1	5.4	5.3	5.4	5.2	5.2	4.6	4.8	...
21	...	...	4.7	5.0	5.1	5.0	5.0	5.5	5.5	5.1	5.0	...a	...
22	...	...	4.5	4.9	5.5	5.2	4.9	5.2	5.5	5.2	5.1	4.2	...
23	...	...	...	5.2	5.5	5.5	5.3	5.5	5.3	5.4	5.4	...	...
24	...	...	...	5.3	5.6	5.6	5.5	5.5	5.5	5.3	4.5	5.5	...
25	1.9	2.4	3.0	3.5	...	...	...	...	...	...	...	4.2	...
26	...	...	4.3	4.9	5.1	5.5	5.3	5.5	5.4	5.3	5.1	4.9	...
27	...	...	...	5.2	5.3	5.5	6.1	5.5	6.1	5.5	...	...	...
28	...	...	...	5.2	5.4	5.2	5.9	5.5	5.6	5.6	5.2	...	...
29													
30													
31													
* MEAN	3.0	4.1	4.5	5.0	5.3	5.3	5.4	5.5	5.4	5.3	5.1	4.7	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	230	220	230	220	220	215	...c	...c	...	...	...
2	...	270	230	220	240	230	230	220	205	220	240	260	...
3	280	240	240	250	220	215	250	290	240	260	290	...	...
4	300	240	230	210	200	220	210	210	215	220	230	230	...
5	280	250	235	230	220	220	215	200	210	240	240	230	...
6	...	250	230	280	230	210	210	230	...c	...c	...c	230	...
7	...	...	230	250	200	200	240	225	230	230	230	230	...
8	260	240	225	220	200	200	190	200	220	220	230	230	...
9	...	...	210	225	200	230	260	210	210	220	230	230	...
10	...	...	210	225	210	220	220	290	220	240	220	...	...
11	...	...	...	220	220	220	250	220	220	250	250	...	...
12	...	...	...	230	215	220	220	220	230	225	220	...	...
13	...	...	...	220	220	220	205	220	210	220	220	240	...
14	...	...	230	220	250	285	...	240	...	260	250	...	...
15	...	250	240	240	220	210	210	220	225	210	210	250	...
16	...	250	235	225	240	250	220	210	230	215	220	240	...
17	...	260	235	220	220	220	210	...	...a	...a	240	230	...
18	...	...	230	220	215	220	...	200	205	230	240	220	...
19	...	...	215	220	210	200	190	200	235	220	230	225	...
20	...	...	230	220	210	200	185	200	220	220	220	240	...
21	...	...	225	225	220	200	195	...	240	225	235	...a	...
22	...	...	235	230	215	200	200	200	200	230	240	230	...
23	...	...	...	215	210	205	215	210	205	230	225	...	...
24	...	...	...	225	215	230	225	230	210	220	225	230	...
25	210	230	220	...	...	...	...	...	...	...	...	240	...
26	...	...	240	220	200	200	200	200	215	220	220	230	...
27	...	...	...	220	215	200	220	210	225	220	...	...	...
28	...	...	...	210	210	200	200	200	240	230	220	...	...
29													
30													
31													
* MEAN	266	248	229	226	217	208	216	210	220	228	232	234	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 38

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1939 FEBRUARY 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.1	1.2	0.7	0.9	1.0	1.0	0.8	...c	...c	0.9	0.7	0.5
2	...	0.7	1.1	1.2	1.0	1.1	1.1	1.9	1.1	0.9	0.9	0.7	0.5
3	...	0.7	0.7	0.9	0.9	1.1	1.1	1.2	1.1	1.1	1.1	0.8	0.7
4	...	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.1	1.0	0.8	0.6	0.5
5	...	0.5	0.7	0.8	1.1	1.2	1.3	1.3	1.2	1.1	1.0	0.7	0.5
6	...	0.8	1.3	1.0	0.9	1.0	1.1	0.9	1.0	...c	...c	0.7	0.5
7	...	0.7	0.8	0.9	1.0	1.1	1.1	1.2	0.9	1.2	0.9	0.7	0.5
8	...	0.6	0.8	0.9	1.1	1.1	1.0	0.8	0.8	0.9	0.8	0.7	0.7
9	...	0.7	0.8	1.0	1.2	1.1	1.5	1.1	1.1	0.8	0.8	0.8	0.6
10	...	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.1	1.1	0.9	0.6	0.5
11	...	0.8	0.8	0.9	1.0	1.1	1.2	1.1	1.1	1.1	0.8	0.7	0.6
12	...	0.8	1.0	0.9	1.0	0.9	0.9	1.0	0.9	1.0	0.8	0.7	0.7
13	...	0.7	0.6	0.9	0.9	1.0	1.1	1.1	1.1	0.8	1.0	0.9	0.8
14	...	0.8	1.0	0.8	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.5
15	...	0.6	0.8	0.6	0.9	1.0	0.9	1.0	1.0	1.0	1.9	0.7	0.6
16	...	0.8	0.8	0.8	0.8	1.0	0.9	1.0	1.1	1.0	0.8	0.6	0.6
17	...	0.6	1.0	0.9	1.0	1.0	0.9	1.0	0.9	1.0	1.0	0.8	0.7
18	...	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.6	0.6
19	...	0.7	0.8	1.1	1.1	1.1	1.2	1.2	1.0	0.9	0.7	0.7	0.6
20	...	0.7	0.8	0.9	1.0	1.0	0.9	1.1	0.9	0.8	0.7	0.6	0.5
21	...	0.7	0.7	0.8	1.0	1.0	0.9	0.9	1.1	1.0	0.9	0.7	0.6
22	...	0.6	0.6	0.9	1.1	1.0	0.9	1.0	1.0	1.0	0.9	0.9	0.5
23	...	0.7	0.8	0.8	1.0	1.0	1.1	1.2	1.1	1.1	0.8	0.8	0.6
24	...	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.5
25	...	0.7	0.7	0.8	1.0	1.1	0.9	1.0	1.1	1.1	0.9	0.8	0.6
26	...	0.8	0.9	0.9	1.0	1.0	1.1	0.9	0.9	0.9	0.8	0.8	0.6
27	...	0.7	0.8	1.0	1.0	1.1	1.0	1.2	1.0	1.0	1.0	0.9	0.7
28	...	0.8	0.9	0.8	1.0	0.9	1.1	1.0	1.2	1.0	0.8	0.8	0.7
29													
30													
31													
MEAN*	...	0.7	0.9	0.9	1.0	1.0	1.1	1.1	1.0	1.0	0.9	0.8	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.8	2.8	3.3	3.7	3.9	4.0	4.1	4.0	p3.7c	p3.5c	3.1	3.1	2.5
2	1.7	2.7	3.2	3.3	3.7	3.7	3.8	4.0	3.8	3.7	3.5	3.0	2.4
3	2.0	2.6	3.2	3.6	3.8	3.8	3.8	3.9	3.9	3.7	3.5	3.1	2.3
4	2.0	2.6	3.2	3.5	3.4	3.8	3.8	3.9	3.9	3.7	3.5	3.0	2.4
5	1.9	2.6	3.1	3.3	3.4	3.4	3.4	3.8	3.3	3.6	3.4	2.9	2.5
6	2.1	2.6	3.1	3.5	3.6	3.8	4.1	4.2	...c	...c	...c	3.1	2.4
7	1.7	2.5	2.9	3.3	3.4	3.6	3.8	3.9	3.8	3.4	3.5	3.0	2.2
8	1.5	2.6	3.1	3.4	3.6	3.8	3.8	3.8	3.7	3.6	3.4	3.0	2.4
9	1.9	2.6	3.0	3.4	3.6	3.7	3.6	4.0	3.7	3.7	3.4	3.2	2.4
10	1.8	2.7	3.1	3.5	3.6	3.7	3.8	3.9	3.7	3.6	3.4	3.1	2.4
11	1.5	2.6	3.1	3.4	3.7	3.6	3.7	3.8	3.7	3.6	3.3	2.9	2.4
12	1.8	2.6	3.1	3.4	3.6	3.8	3.8	3.9	3.7	3.7	3.3	2.9	2.4
13	1.8	2.7	3.0	3.5	3.7	3.8	3.7	3.8	3.8	3.6	3.4	3.1	2.3
14	2.0	2.5	3.1	3.3	3.6	3.6	3.6	3.8	3.8	3.7	3.5	3.1	2.4
15	2.8	2.5	3.0	3.3	3.6	3.9	4.0	3.9	3.8	3.7	3.3	3.0	2.3
16	1.8	2.5	3.0	3.3	3.5	3.6	3.6	3.6	3.4	3.5	3.3	3.0	2.3
17	1.9	2.7	3.1	3.5	3.7	3.6	3.6	3.3	...a	...a	3.4	2.8	2.5
18	1.9	2.6	3.1	3.0	3.1	3.7	3.7	3.8	3.7	3.5	3.4	2.8	2.3
19	1.8	2.5	3.0	3.2	3.6	3.8	3.9	3.8	3.8	3.6	3.3	2.9	2.2
20	1.8	2.5	3.1	3.5	3.6	3.6	3.8	3.9	3.8	3.6	3.4	3.0	2.2
21	1.8	2.5	3.1	3.5	3.6	3.7	3.5	3.0	3.3	3.8	3.4	p3.0a	2.4
22	1.9	2.5	2.9	3.4	3.7	3.9	3.8	3.9	3.9	3.9	3.4	2.9	2.2
23	1.8	2.4	3.1	3.5	3.5	3.9	4.0	4.1	3.9	3.6	3.6	3.1	2.3
24	1.9	2.6	3.2	3.5	3.6	3.7	3.8	3.9	3.8	3.6	3.5	3.0	2.4
25	1.2	2.1	1.7	3.2	3.5	3.4	3.3	3.3	3.6	3.5	3.2	2.9	2.0
26	2.0	2.8	3.2	3.4	3.8	3.8	3.9	4.0	3.9	3.7	3.4	3.0	2.4
27	1.8	2.6	3.2	3.5	3.8	3.8	4.0	3.5	3.7	3.9	3.3	3.1	2.3
28	1.6	2.6	3.1	3.5	3.8	4.0	4.1	4.0	4.1	3.9	3.4	3.0	2.2
29													
30													
31													
MEAN*	1.8	2.6	3.0	3.4	3.6	3.7	3.8	3.8	3.7	3.7	3.4	3.0	2.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 39

MARCH 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1939

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.6	6.3	6.2	6.2	5.9	5.9	6.1	8.6	9.5	10.2	10.4	10.3	11.4	11.4	10.8	10.5	10.0	8.8	9.1	9.0	7.8	7.3	7.1	6.3	8.4
2	6.4	6.0	5.7	5.6	5.5	5.3	5.1	5.1	5.3	6.0c	6.8	8.4	8.4	9.0	8.8	8.4	8.3	8.6	7.7	7.6	7.0	6.0	5.9	5.8	p6.8
3	5.9	5.6	4.5	3.8	3.5	3.4	4.5	6.7	7.3	8.4	9.3	9.9	10.1	10.0	10.2	10.2	10.2	9.3	9.1	8.9	7.8	6.8	5.9	5.8	7.4
4	5.7	5.8	5.5	4.9	4.4	4.1	4.7	6.7	7.1	7.3	7.5	6.9	7.5	8.4	8.0	7.9	7.0	7.3	7.6	7.0	6.3	5.9	5.4	4.6	6.4
5	4.0	3.6	3.6	3.6	3.4	3.3	3.9	5.5	6.3	8.2	9.3	10.6	10.8	9.7	9.5	9.7	9.3	9.2	8.6	7.9	6.9	6.1	5.5	5.2	6.8
6	5.1	5.0	4.5	4.1	3.7	3.7	4.5	5.2	5.5	5.9	6.2	6.7	7.4	8.4	9.0	8.9	8.8	8.1	8.4	8.2	6.5	5.9	5.6	5.5	6.3
7	5.3	5.1	4.3	4.0	4.0	3.8	4.3	5.1	5.6	6.0	6.2	6.4	7.3	7.7	8.5	8.6	8.8	8.3	8.0	7.6	6.0	5.5	5.3	5.3	6.1
8	5.3	5.1	4.4	4.1	3.9	3.7	4.8	6.5	7.5	8.4	8.8	9.9	10.6	11.0	11.1	11.1	11.0	10.5	10.2	9.0	7.5	6.7	5.8	5.7	7.6
9	5.6	5.8	5.7	4.8	4.5	4.4	5.0	7.4	8.4	8.7	9.2	10.1	9.9	10.6	10.9	11.0	10.2	9.3	9.6	9.5	8.2	6.7	6.2	5.8	7.8
10	5.9	5.5	5.4	5.2	4.9	4.5	4.6	5.8	6.5	8.0	9.7	10.0	10.0	10.8	11.2	10.3	10.5	10.1	9.2	8.7	6.9	6.2	5.8	5.9	7.6
11	5.8	5.9	5.5	5.2	4.3	3.7	4.3	6.4	7.4	8.7	9.7	9.6	9.9	10.3	10.7	10.6	10.4	10.8	9.6	9.0	8.4	6.9	6.5	6.0	7.7
12	5.9	5.7	5.5	5.9	5.3	4.1	4.5	6.6	8.2	9.0	9.9	10.6	11.1	10.8	11.4	11.6	10.7	10.7	10.3	9.5	8.2	6.6	6.1	5.8	8.1
13	5.6	5.3	5.5	5.1	4.3	4.4	5.0	6.5	8.2	8.7	9.3	10.0	10.7	10.7	10.2	10.8	10.6	10.2	9.5	8.6	6.2	5.5	5.4	5.2	7.6
14	5.2	5.2	5.1	4.8	4.0	3.9	4.6	6.0	7.7	7.7	8.4	9.6	10.0	9.5	9.8	9.8	10.4	10.2	9.8	8.8	7.0	6.5	6.0	6.4	7.4
15	6.0	5.5	5.4	5.4	4.5	4.5	5.1	6.4	7.2	8.2	8.9	9.4	9.5	10.2	10.7	10.5	10.3	10.0	9.6	8.4	6.2	5.7	5.4	5.4	7.4
16	5.2	4.9	4.7	4.7	4.4	3.8	4.4	6.4	7.4	8.0	9.0	10.0	10.5	11.6	...c	...c	...c	9.1	9.7	9.0	7.0	6.6	6.0	5.9	...
17	5.5	5.3	5.2	5.2	4.6	4.3	4.8	5.7	6.4	6.2	7.0	9.1	10.5	10.6	10.5	10.8	10.4	10.5	9.9	8.4	5.4	4.9	4.7	4.5	7.1
18	4.3	4.6	4.8	4.4	3.6	2.9	4.0	6.1	7.6	p8.6c	9.7	p10.5c	11.0	11.0	10.5	10.4	10.0	9.8	9.5	9.0	7.8	5.5	5.1	4.8	p7.3
19	4.8	4.6	4.7	4.6	4.1	3.9	4.4	6.9	8.1	8.9	9.0	9.7	10.3	10.3	10.3	10.4	10.5	10.8	10.0	8.4	6.1	5.3	4.9	4.8	7.3
20	4.8	4.7	4.7	4.0	3.4	3.2	4.5	6.4	8.4	9.2	9.0	9.6	10.0	11.0	11.1	11.0	11.0	10.8	10.3	9.0	7.2	5.9	5.5	5.3	7.5
21	5.2	5.3	5.0	5.0	4.8	4.5	4.6	6.8	8.3	9.7	9.9	10.2	10.4	10.7	11.0	10.5	11.0	11.5	10.5	9.5	7.5	6.3	5.8	5.5	7.9
22	5.7	5.7	5.5	5.2	4.6	4.8	4.8	6.5	7.3	7.1	7.9	9.6	10.9	10.8	11.1	11.8	11.8	10.8	9.7	9.4	7.6	6.5	6.2	5.6	7.8
23	5.7	5.5	5.4	5.0	4.6	4.3	5.2	7.8	9.4	11.3	11.2	10.9	11.6	11.2	10.9	10.1	9.9	9.9	8.9	7.8	6.5	5.8	5.1	4.9	7.9
24	4.7	4.9	4.7	5.0	4.3	2.8	3.8	6.4	7.7	9.6	9.9	10.7	10.8	11.3	11.5	11.4	10.4	10.1	8.9	7.2	6.1	5.5	4.8	4.6	7.4
25	4.7	4.7	4.8	4.6	3.4	3.4	4.4	6.7	8.3	8.7	8.8	9.6	10.4	10.7	10.7	10.2	9.8	9.9	8.9	7.9	6.1	5.4	5.0	4.8	7.2
26	4.8	5.0	4.8	4.6	4.0	3.9	4.8	6.9	8.0	8.9	9.2	10.0	10.7	10.9	11.4	11.1	11.3	10.3	9.9	8.6	6.7	6.3	5.6	5.4	7.6
27	5.2	5.1	5.0	4.9	5.1	5.1	5.6	7.8	8.3	8.7	9.2	10.2	10.9	11.3	11.5	11.7	10.7	10.1	9.0	7.6	7.2	6.5	6.3	5.5	7.8
28	4.8	4.5	4.5	3.9	3.5	3.9	4.3	7.3	8.2	9.5	10.3	11.6	12.2	12.3	11.3	11.5	11.7	10.8	10.0	8.3	6.6	6.2	5.6	4.9	7.8
29	4.4	3.7	3.7	3.4	3.2	3.6	3.7	4.6	5.0	5.0	4.8	4.9	5.1	5.1	5.0	4.8	5.3	4.9	4.8	4.4	3.8	3.6	3.2	3.4	4.3
30	3.2	2.8	2.9	2.7	2.2	1.9	3.1	4.3	5.1	6.3	7.5	8.3	8.7	9.8	8.8	9.2	9.3	8.4	7.5	6.0	5.1	4.5	4.4	4.3	5.7
31	4.3	3.9	3.4	3.2	2.2	2.0	3.1	5.9	9.2	10.7	10.5	10.4	12.0	12.2	12.2	11.3	11.1	9.4	8.0	7.1	5.4	5.4	5.2	4.9	7.2
MEAN*	5.2	5.0	4.9	4.6	4.1	3.9	4.5	6.4	7.4	8.3	8.8	9.5	10.0	10.3	10.3	10.2	10.0	9.6	9.1	8.2	6.7	6.0	5.5	5.3	7.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 40

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MARCH 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	280	280	285	275	260	260	255	240	240	280	300	325	330	320	300	340	290	240	260	240	235	250	270	290	277
2	315	320	330	320	310	305	330	330	485	p450c	420	340	390	340	350	300	240	235	260	250	230	270	300	280	p321
3	280	250	260	270	260	290	270	270	330	300	290	310	290	330	340	330	240	230	250	240	230	230	300	290	278
4	310	290	260	240	270	280	310	250	230	360	340	460	430	400	380	350	380	250	270	260	230	265	260	260	306
5	290	330	360	270	300	300	300	260	420	320	320	310	290	300	330	300	230	240	240	220	225	250	270	290	290
6	275	260	260	250	350	380	280	240	350	350	410	410	360	330	320	310	230	240	260	240	230	250	270	280	297
7	270	260	260	290	270	270	280	250	365	380	380	410	360	340	320	300	290	240	250	225	260	280	280	280	296
8	280	240	260	260	260	260	250	220	225	270	270	290	310	300	310	300	230	240	250	220	230	245	260	320	262
9	300	290	250	250	270	260	270	240	230	260	290	280	310	300	300	280	290	250	250	240	220	230	270	280	267
10	270	270	320	260	260	260	270	240	280	320	290	300	330	300	280	280	280	240	230	230	220	250	285	280	273
11	280	260	250	230	230	280	280	250	270	290	280	290	290	310	300	280	290	260	240	240	230	230	260	260	266
12	260	270	270	240	220	210	250	240	230	270	280	280	300	300	300	280	360	230	230	225	230	220	250	280	259
13	270	260	270	230	250	270	250	240	230	265	275	290	290	280	290	290	300	250	235	215	200	260	260	280	260
14	280	280	270	245	245	260	250	210	260	260	280	300	275	280	310	280	275	260	235	220	230	260	270	260	262
15	260	280	270	250	230	260	260	230	230	270	270	280	280	300	300	270	270	240	240	220	230	250	260	260	259
16	280	290	280	235	230	240	250	240	240	270	290	300	320	290	...c	...c	...c	275	260	220	230	240	250	270	...
17	260	280	280	260	260	265	265	250	230	280	380	310	300	280	290	280	230	230	225	200	200	250	260	270	264
18	280	280	270	260	240	250	250	230	230	p250c	280	p300c	280	270	300	290	260	230	230	220	210	210	240	250	p255
19	280	280	280	250	240	240	250	250	230	250	270	290	280	275	270	280	230	240	230	210	200	250	270	280	255
20	270	260	250	225	220	270	280	240	230	260	270	280	310	290	290	280	240	235	230	210	215	230	250	250	254
21	260	270	260	250	240	250	250	230	230	220	260	280	280	300	290	300	240	250	230	200	230	220	250	280	253
22	290	280	270	270	270	280	280	250	290	290	330	330	310	310	330	305	275	230	230	230	230	250	260	270	278
23	270	320	290	260	320	270	270	230	220	250	270	300	280	290	280	270	230	240	225	230	220	250	250	270	263
24	280	290	280	240	230	210	270	250	230	270	290	290	280	290	285	270	270	250	230	210	240	235	260	300	260
25	280	285	260	225	220	275	280	240	260	270	280	295	310	300	280	280	280	240	230	230	230	250	250	280	264
26	280	275	260	250	235	250	240	230	230	275	260	280	280	310	290	290	270	230	230	215	220	245	230	250	255
27	260	270	270	260	250	270	250	240	240	245	270	270	280	300	290	270	240	240	225	230	240	240	230	250	255
28	280	280	280	280	290	305	270	240	230	250	290	290	280	290	275	290	260	240	230	210	230	260	230	280	265
29	280	330	330	260	210	330	330	280	390	510	725	700	590	700	660	640	450	260	280	240	300	265	300	p290a	p406
30	280	330	290	270	300	345	330	260	460	320	320	300	310	290	290	290	265	240	220	220	235	330	300	300	296
31	300	290	250	250	280	330	260	250	270	250	270	370	290	280	250	260	240	230	220	230	230	280	270	320	270
MEAN*	279	282	277	256	262	275	272	246	277	294	315	325	327	316	313	303	272	242	239	225	229	250	263	277	276

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^DF2 EQUAL TO OR LESS THAN f^DF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 41

MARCH 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1939

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	[illegible]	5.3	5.8	5.7	5.6	5.5	5.5	4.5	...	...
2	...	3.8	4.2	...c	5.0	5.3	5.9	5.5	6.0	5.3	...	...	...
3	...	...	5.1	4.5	5.1	5.5	5.1	5.0	...b	5.6	...	...	...
4	...	...	...	4.8	4.8	4.7	5.2	5.3	5.3	5.6	5.5	...	...
5	...	...	4.7	5.1	5.6	5.6	5.3	5.1	5.5	5.3	...	...	...
6	...	...	4.4	4.4	4.9	5.0	5.0	5.0	5.0	5.2	...	...	...
7	...	...	4.3	4.6	4.8	4.9	5.2	5.2	5.3	5.0	4.6	...	...
8	...	...	...	4.8	4.8	5.1	5.7	5.1	5.5	5.1	...	...	...
9	...	...	...	4.5	4.8	5.0	4.8	5.3	5.1	4.8	4.4	...	...
10	...	...	4.1	5.1	4.9	4.7	5.5	5.4	4.6	4.6	5.5	...	...
11	...	...	4.3	4.6	5.2	5.1	5.0	5.4	5.2	4.6	4.5	4.4	...
12	...	...	...	4.5	4.9	5.1	5.3	5.2	5.2	4.7	4.3	...	...
13	...	...	...	4.2	4.7	5.2	5.2	5.0	5.1	4.8	4.5	...	...
14	...	...	4.2	4.3	4.5	5.1	5.1	5.0	5.1	4.5	4.5	3.8	...
15	...	...	...	4.7	4.9	5.0	5.1	4.9	5.1	4.5	4.1	...	...
16	...	...	...	4.5	4.8	4.5	5.3	5.0	...c	...c	...c	...	...
17	...	...	...	4.3	5.3	5.1	5.1	5.0	4.8	4.7	...	...	...
18	...	...	...	...c	4.9	...c	5.1	4.5	5.3	4.5	...	...	...
19	...	...	...	4.4	4.8	5.1	5.3	5.1	5.0	4.9	...	...	...
20	...	...	...	4.6	4.9	5.1	5.5	5.1	4.9	4.8	...	...	...
21	...	...	...	...	4.6	5.1	5.0	5.3	5.1	...	...	...	...
22	...	...	4.2	4.7	5.3	5.3	5.3	5.3	5.4	4.9	4.6	...	...
23	...	...	...	4.8	4.7	5.4	4.7	5.1	4.9	4.5	...	...	...
24	...	...	...	4.6	5.1	5.1	5.1	5.0	5.0	4.7	4.3	...	...
25	...	...	4.3	4.7	4.6	5.0	5.5	5.2	4.8	4.2	4.2	...	...
26	...	...	...	4.8	4.5	4.8	4.8	4.9	4.8	4.5	4.5	...	...
27	...	...	3.9	4.2	4.6	5.0	5.1	5.1	4.8	4.8	...	...	...
28	...	...	...	4.3	4.3	5.4	5.1	5.1	4.7	4.2	4.3	...	...
29	...	...	4.0	4.3	4.4	4.3	4.5	4.5	4.5	4.3	4.3	...	...
30	...	...	4.2	4.5	5.1	5.2	4.8	5.1	4.8	4.4	4.0	...	...
31	...	...	3.7	4.6	4.6	4.8	5.2	5.0	...	4.4	...	...	...
MEAN*	...	3.8	4.3	4.6	4.9	5.1	5.2	5.1	5.1	4.8	4.5	4.1	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	230	205	200	250	270	220	230	...	...
2	...	270	250	...c	200	200	250	230	230	220	...	...	...
3	...	...	225	200	210	260	210	200	...b	220	...	...	...
4	...	...	...	230	210	200	230	250	220	230	230	...	...
5	...	...	230	230	225	[illegible]	220	210	220	220	...	...	...
6	...	...	240	220	220	210	210	210	225	230	...	...	...
7	...	...	240	225	220	200	210	200	220	220	230	...	...
8	...	...	...	220	210	200	230	200	230	230	...	...	...
9	...	...	...	210	215	200	200	200	230	220	220	...	...
10	...	...	230	220	200	200	200	200	210	230	220	...	...
11	...	...	230	220	220	215	210	210	220	230	230	240	...
12	...	...	...	220	220	200	230	210	220	230	220	...	...
13	...	...	...	220	200	215	200	200	215	210	250	...	...
14	...	...	200	200	200	210	220	220	215	210	220	230	...
15	...	...	...	230	215	210	230	230	220	240	210	...	...
16	...	...	...	230	230	200	240	240	...c	...c	...c	...	...
17	...	...	...	220	230	210	210	215	220	240	...	...	...
18	...	...	...	...c	210	...c	200	200	220	250	...	...	...
19	...	...	...	220	210	210	200	210	230	215	...	...	...
20	...	...	...	220	210	200	230	220	220	240	...	...	...
21	...	...	...	...	215	200	210	230	240	...	...	...	...
22	...	...	240	220	220	210	210	205	230	230	230	...	...
23	...	...	...	225	210	200	200	205	230	230	...	...	...
24	...	...	...	215	220	210	225	215	220	230	225	...	...
25	...	...	240	230	210	200	210	200	230	230	220	...	...
26	...	...	...	220	210	200	200	190	220	230	230	...	...
27	...	...	230	210	200	230	230	220	230	225	...	...	...
28	...	...	...	220	200	200	250	230	220	230	230	...	...
29	...	...	250	260	230	220	250	250	240	230	250	...	...
30	...	...	240	240	260	270	200	200	240	230	230	...	...
31	...	...	230	220	220	230	220	230	...	230	...	...	...
MEAN*	...	270	234	222	215	212	217	215	226	228	228	235	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 42

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

 MARCH 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.8	0.9	1.3	1.0	1.1	1.1	1.1	1.0	0.8	0.8	0.6
2	...	0.7	0.8	...c	1.1	1.0	1.2	1.1	1.2	1.0	1.0	0.7	0.5
3	...	0.7	0.9	0.8	1.0	2.1	1.2	1.1	2.9	0.8	1.0	0.6	0.6
4	...	0.7	0.8	1.0	1.0	1.3	1.1	1.1	1.1	0.8	0.8	0.7	0.6
5	...	0.7	0.8	1.1	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.7
6	...	0.6	0.9	0.9	1.0	1.1	1.1	1.2	1.1	1.1	1.0	0.9	0.7
7	...	0.8	1.0	0.8	1.1	1.2	1.0	1.0	1.0	1.1	0.8	0.7	0.7
8	...	0.6	0.8	1.0	0.8	0.8	0.8	1.0	1.0	1.0	0.8	0.8	0.6
9	...	0.7	0.8	0.9	0.8	1.0	1.1	1.1	1.1	1.0	1.1	0.8	0.6
10	...	0.6	0.7	0.7	0.8	0.9	1.2	1.1	1.0	1.0	1.0	0.8	0.7
11	...	0.6	0.7	0.9	1.1	1.1	1.1	1.2	1.1	1.1	1.0	0.8	0.6
12	...	0.7	1.0	1.0	0.8	0.9	0.8	1.0	1.0	0.9	0.8	0.7	0.5
13	...	0.6	0.7	0.9	1.0	1.1	1.1	1.2	1.1	1.1	1.0	0.8	0.7
14	...	0.7	0.8	0.8	0.8	0.9	0.9	1.0	0.8	0.8	0.8	0.7	0.6
15	...	0.6	1.1	0.8	1.0	0.8	1.0	1.0	0.9	0.9	0.8	0.8	0.9
16	...	0.6	0.8	1.0	1.1	1.0	1.1	1.2	...c	...c	...c	0.7	0.6
17	...	0.8	1.0	1.0	1.1	1.0	1.1	1.0	1.0	0.9	0.7	0.7	0.6
18	...	0.6	0.8	...c	1.0	...c	1.1	1.1	1.0	1.0	1.0	0.8	0.6
19	...	1.0	1.1	1.1	1.0	1.1	1.1	1.0	1.0	1.0	1.0	0.8	0.7
20	...	0.7	0.8	1.0	1.1	1.0	1.9	1.2	1.1	1.3	1.0	0.8	0.5
21	...	0.7	1.7	1.1	1.3	1.8	1.3	1.3	1.7	1.2	1.1	1.2	1.0
22	...	0.8	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	0.8	0.7	0.6
23	...	0.7	0.7	1.0	1.1	1.2	1.3	1.7	1.4	1.2	1.0	0.7	0.6
24	...	0.7	0.8	1.6	1.2	1.1	1.1	1.2	1.1	1.0	0.9	0.6	0.5
25	...	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.5
26	...	0.5	0.6	0.6	0.9	0.9	0.9	1.0	1.0	0.8	0.8	0.7	0.6
27	...	0.7	0.7	0.8	1.0	1.0	1.0	1.0	1.1	1.0	0.9	0.7	0.7
28	...	1.0	1.1	0.8	1.0	1.0	1.1	1.2	0.8	1.0	0.8	0.7	0.5
29	...	0.6	1.0	0.8	0.9	1.1	1.1	1.1	1.0	1.0	1.0	0.7	0.5
30	...	0.7	0.7	1.0	1.1	1.1	0.9	1.1	1.1	1.1	1.0	0.7	0.6
31	...	0.7	0.8	0.9	1.0	1.0	0.9	0.9	0.9	1.0	0.8	0.7	0.5
MEAN*	...	0.7	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.0	0.9	0.8	0.6

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.8	2.6	3.0	3.4	3.7	3.6	3.5	3.1	3.3	3.4	3.4	3.0	2.2
2	1.8	2.6	2.9	p3.3c	3.5	3.7	3.6	3.8	3.8	3.6	3.3	2.8	2.1
3	1.8	3.2	3.0	3.3	3.3	4.5	3.5	3.7	p3.6b	3.6	3.3	2.9	2.3
4	1.8	2.4	2.9	3.3	3.4	3.6	4.1	4.1	4.1	3.5	3.3	2.8	2.2
5	1.2	2.2	2.9	3.3	3.5	3.3	3.8	3.8	3.7	3.6	3.3	2.8	2.0
6	1.7	2.5	3.0	3.1	3.7	3.5	3.8	3.5	3.6	3.5	3.3	2.8	2.1
7	1.5	2.4	2.9	3.2	3.4	3.5	3.6	3.7	3.7	3.4	3.2	2.7	2.0
8	1.1	2.3	2.9	3.4	3.3	3.6	3.7	3.7	3.6	3.4	3.2	2.7	2.0
9	1.6	2.4	3.0	3.5	3.5	3.7	3.9	3.5	3.5	3.5	3.3	2.6	1.9
10	1.6	2.3	3.0	3.3	3.8	3.6	3.8	3.8	3.7	3.6	3.2	2.8	1.9
11	1.6	2.2	2.8	3.4	3.7	3.8	3.7	3.5	3.4	3.4	3.2	2.7	2.4
12	1.6	2.4	2.8	3.2	3.4	3.5	3.5	3.6	3.6	3.4	3.0	2.6	2.0
13	1.5	2.4	2.9	3.2	3.4	3.5	3.7	3.6	3.3	3.3	3.1	2.5	2.0
14	1.5	2.2	3.1	3.1	3.4	3.6	3.8	3.6	3.6	3.3	3.1	2.6	1.9
15	1.5	2.1	3.0	3.1	3.5	3.5	3.5	3.3	2.9	3.2	3.0	2.5	2.0
16	1.5	2.3	2.8	3.1	3.5	3.7	3.7	3.6	...c	...c	...c	2.6	1.8
17	1.3	2.2	2.9	3.2	3.4	3.5	3.4	3.6	3.5	3.3	3.0	2.5	1.9
18	1.4	2.2	3.1	p3.3c	3.5	p3.6c	3.7	3.7	3.5	3.3	3.1	2.5	1.9
19	1.5	2.4	2.9	3.3	3.5	3.7	3.8	3.5	3.5	3.5	3.1	2.5	1.7
20	1.5	2.5	3.0	3.3	3.5	3.6	3.8	3.8	3.6	3.4	3.1	2.7	1.6
21	1.5	2.4	3.0	3.4	3.5	3.8	3.7	3.7	3.8	3.7	3.2	2.6	1.9
22	1.5	2.3	3.0	3.3	3.3	3.6	3.8	3.6	3.6	3.3	3.1	2.6	1.8
23	1.1	2.3	2.8	3.1	3.5	3.5	3.7	3.7	3.5	3.4	3.1	2.5	1.8
24	1.1	2.3	2.8	3.2	3.3	3.6	3.6	3.7	3.6	3.4	3.0	2.5	1.6
25	1.3	2.4	2.8	3.2	3.4	3.9	3.6	3.6	3.5	3.3	3.0	2.5	1.8
26	1.1	2.4	2.6	3.2	3.1	3.0	3.5	3.5	3.5	3.3	3.0	2.5	1.7
27	1.2	2.3	2.7	3.0	3.2	3.4	3.5	3.6	3.5	3.3	3.0	2.4	1.7
28	1.1	2.2	2.6	2.9	3.3	3.4	3.3	3.6	3.5	3.4	3.0	2.4	1.7
29	1.5	2.2	2.5	2.9	3.2	3.4	3.4	3.4	3.3	3.2	2.9	2.4	1.7
30	1.5	2.2	2.7	3.1	3.3	3.4	3.4	3.4	3.3	3.1	3.0	2.4	1.7
31	1.3	2.1	2.7	3.0	3.3	3.5	3.5	3.4	3.3	3.2	2.9	2.4	1.8
MEAN*	1.4	2.4	2.9	3.2	3.4	3.6	3.6	3.6	3.5	3.4	3.1	2.6	1.9

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 43

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1939 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — APRIL 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.8	4.6	4.6	4.2	3.7	3.4	3.9	6.4	7.1	8.8	10.0	10.6	12.1	12.1	11.4	11.0	11.4	11.2	10.0	8.3	6.4	p5.0a	3.8	3.9	p7.4
2	3.9	3.9	4.1	3.9	4.3	2.6	3.4	5.2	5.8	5.8	6.2	6.8	7.0	7.3	7.5	7.3	7.3	7.2	6.2	4.8	4.1	3.8	3.6	4.2	5.3
3	4.5	4.4	4.3	4.2	3.4	3.2	3.3	5.4	6.6	8.4	9.9	10.2	10.9	10.2	10.7	p10.5c	10.4	9.3	8.1	7.0	5.8	5.7	5.0	4.9	p6.9
4	4.5	4.6	4.7	4.6	4.4	3.5	3.7	6.9	8.2	9.1	10.0	10.2	11.1	10.9	10.8	11.2	10.8	10.1	8.9	7.1	5.2	4.7	4.5	4.2	7.2
5	4.0	4.2	4.4	4.2	3.8	4.0	4.3	5.9	7.6	8.1	7.4	7.6	9.0	10.5	11.1	10.8	10.9	10.2	8.9	6.8	5.0	5.1	4.8	4.6	6.8
6	4.5	4.4	4.0	3.7	2.8	2.7	3.4	6.6	8.7	10.0	10.2	10.2	10.6	10.5	p11.0c	p11.5c	12.2	11.2	9.8	7.9	6.4	5.7	4.9	4.7	p7.4
7	4.9	4.9	5.1	4.8	2.9	2.8	3.6	6.3	8.0	9.8	11.3	10.4	10.7	11.5	11.1	11.3	11.5	10.9	10.4	8.2	7.0	5.8	5.4	5.2	7.6
8	5.1	5.2	4.5	4.8	4.1	3.9	4.0	6.5	9.2	10.2	10.2	10.8	11.3	11.3	12.0	12.0	12.0	11.3	10.2	7.7	6.9	6.2	6.0	5.5	8.0
9	5.2	5.4	5.7	5.2	4.9	5.0	5.2	7.6	9.0	9.5	10.7	10.6	12.4	11.5	12.5	12.0	11.1	10.6	10.3	8.9	7.7	6.9	5.5	5.4	8.3
10	5.5	5.3	5.3	5.2	4.7	4.6	4.5	6.9	8.6	10.2	11.6	11.8	12.3	11.8	11.4	12.7	12.2	11.6	10.6	8.6	7.0	5.9	4.8	4.9	8.2
11	4.8	5.1	5.2	4.9	3.8	4.0	4.3	7.0	9.1	10.8	10.5	11.5	11.1	10.8	11.9	11.4	10.6	10.3	10.0	8.3	6.6	5.8	5.0	4.6	7.8
12	4.3	4.0	3.9	3.9	4.0	4.0	4.5	7.0	8.5	9.1	10.9	11.0	11.5	11.8	12.6	12.6	12.0	11.0	9.6	7.5	6.4	5.8	5.5	5.1	7.8
13	5.1	4.7	4.8	4.7	4.7	4.7	4.8	7.2	9.5	10.4	10.9	11.8	11.5	11.6	11.6	12.0	11.7	11.2	10.0	8.0	6.5	5.8	5.0	4.3	8.0
14	4.5	4.6	4.9	4.9	4.6	4.1	4.1	7.2	9.4	10.0	10.6	11.3	11.5	12.0	12.1	12.2	11.7	11.2	10.2	7.8	7.1	6.6	6.1	5.5	8.1
15	5.0	4.9	5.0	5.1	5.5	5.2	5.4	7.5	8.4	9.5	11.6	11.5	11.9	11.5	11.7	11.7	11.6	11.1	10.0	7.9	6.6	6.0	5.3	4.9	8.1
16	4.8	4.6	4.3	4.9	5.1	4.0	3.5	6.7	8.9	10.7	11.5	11.6	11.7	12.2	12.3	12.0	11.5	10.7	9.5	7.1	5.6	5.2	5.0	4.8	7.8
17	4.7	4.4	4.2	4.1	4.0	3.6	3.5	7.2	p9.0c	10.3	10.5	11.6	10.6	11.5	13.3	13.5	13.1	13.2	12.0	12.1	9.2	7.7	8.5	6.7	p8.7
18	4.7	4.3	4.7	4.7	4.8	4.5	4.2	6.6	11.7	13.6	13.8	13.6	12.0	11.7	12.4	12.0	11.2	10.2	10.0	7.2	7.0	6.0	4.9	3.7	8.3
19	3.6	4.0	4.1	3.7	3.2	3.2	3.3	5.6	7.2	7.6	8.2	8.8	9.6	10.8	10.4	10.4	9.7	9.2	8.4	7.2	6.0	5.2	4.5	4.1	6.6
20	3.9	3.6	3.2	3.2	2.9	2.4	2.7	5.9	7.4	8.3	9.4	9.4	9.5	10.4	9.7	10.0	9.4	8.6	7.5	6.4	5.8	5.0	4.0	3.8	6.4
21	3.1	2.9	3.1	3.4	2.9	2.9	3.0	6.6	8.3	9.4	10.6	10.5	10.2	10.7	10.8	10.4	10.0	10.2	8.6	6.9	6.3	5.6	5.4	5.0	7.0
22	4.7	4.4	4.7	4.6	4.3	4.0	3.9	7.5	10.8	11.4	12.5	12.0	12.2	12.2	12.4	11.8	11.2	10.5	10.0	7.9	6.6	5.4	4.8	4.4	8.1
23	p4.5a	4.6	4.7	4.8	4.3	4.1	4.0	6.2	7.5	8.9	10.7	10.9	12.0	11.7	11.0	9.7	11.5	13.0	12.0	9.9	7.3	5.0	5.5	5.5	p7.9
24	5.2	5.3	5.3	4.4	3.2	3.1	3.3	7.6	10.9	11.5	12.3	13.0	12.8	11.3	11.6	11.5	12.0	10.3	9.6	7.7	6.1	5.1	4.5	4.2	8.0
25	3.8	3.4	3.4	3.1	2.0	1.7	2.1	3.8	6.5	6.6	7.1	8.2	9.0	9.7	9.8	8.9	8.8	9.1	7.2	6.1	5.9	4.8	4.6	4.6	5.8
26	4.1	3.8	3.5	3.5	2.8	2.3	2.6	5.4	6.9	8.1	9.2	9.4	9.6	9.7	10.1	10.0	9.8	9.3	8.5	6.7	6.3	5.3	4.6	3.9	6.5
27	3.7	3.9	3.8	3.6	3.3	3.4	3.1	6.3	8.0	9.3	10.2	11.3	10.3	10.3	11.2	11.0	11.0	9.6	8.7	6.9	6.4	5.0	4.0	3.5	7.0
28	3.4	3.2	3.2	3.4	3.5	3.8	2.7	6.2	8.2	9.2	10.5	12.0	11.1	11.5	11.6	12.0	11.5	11.0	10.2	8.2	7.0	5.7	4.8	4.7	7.4
29	4.7	4.3	4.0	4.0	3.7	3.4	3.6	7.2	9.6	11.7	12.4	12.2	11.7	11.6	12.6	12.8	12.4	10.7	10.2	8.1	6.2	5.5	4.9	4.7	8.0
30	4.2	3.8	3.8	3.8	3.8	3.8	4.3	6.8	9.8	10.8	11.9	12.4	12.3	12.2	12.6	12.0	12.2	11.4	10.0	7.8	7.0	6.5	5.7	4.7	8.1
31																									
MEAN*	4.4	4.4	4.4	4.2	3.8	3.6	3.7	6.5	8.5	9.6	10.4	10.8	11.0	11.1	11.4	11.3	11.1	10.5	9.5	7.7	6.4	5.6	5.0	4.7	7.5

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 44

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	300	300	320	280	p285a	290	260	240	230	250	280	280	280	270	260	270	260	250	250	250	260	p290a	320	330	p275
2	300	290	280	230	230	380	300	360	300	330	410	390	370	360	320	300	290	250	230	240	280	280	300	320	306
3	330	310	280	260	240	290	290	250	240	300	280	290	300	310	300	280	260	250	240	240	270	250	280	280	276
4	280	290	280	250	250	230	230	230	260	260	260	260	290	300	290	290	250	260	240	210	240	260	270	280	261
5	p285a	290	270	260	250	320	280	240	260	280	285	280	330	320	280	270	270	250	220	230	230	270	270	270	p271
6	290	260	250	250	250	290	280	230	240	260	270	270	270	280	p280c	p270c	270	240	220	215	230	240	260	p280a	p258
7	300	280	250	250	p280a	310	270	225	240	260	270	260	290	285	290	290	250	250	230	230	230	240	250	280	p263
8	280	280	270	260	260	270	250	230	240	230	250	270	290	270	280	260	260	230	220	220	220	250	250	240	253
9	350	300	270	255	260	280	240	240	240	230	225	260	280	260	290	240	220	240	220	230	250	240	240	250	255
10	260	280	270	270	270	270	270	240	260	260	290	260	270	260	280	250	240	230	230	240	240	240	300	290	261
11	330	360	270	250	p260a	270	280	250	230	270	280	270	260	270	260	260	230	250	230	225	240	240	270	270	p264
12	270	280	p290a	310	280	270	250	240	230	250	280	280	270	270	280	270	250	230	270	210	250	250	270	p280a	p264
13	p290a	300	270	310	280	p290a	300	250	250	220	225	270	270	260	260	270	260	230	220	230	230	240	230	280	p259
14	300	310	260	270	260	260	220	230	230	230	250	280	270	290	240	260	250	220	220	250	260	250	250	260	255
15	290	p300a	p300a	300	280	260	260	230	230	270	260	280	270	280	280	280	240	250	225	230	220	235	240	250	p261
16	270	290	310	320	230	230	260	220	230	250	250	260	270	290	280	260	250	240	220	210	225	250	255	270	256
17	260	250	260	260	250	250	250	230	p230c	230	220	280	230	300	330	290	270	250	250	240	260	290	240	280	p258
18	270	310	300	280	260	300	350	270	250	260	260	270	250	270	260	250	230	240	230	215	230	230	270	p320a	p266
19	390	380	350	320	320	330	320	260	280	280	300	325	320	300	310	290	260	250	250	310	270	260	300	280	302
20	320	360	280	300	270	310	330	265	250	250	295	300	310	310	290	280	260	240	225	260	270	240	260	270	281
21	240	320	300	275	250	240	240	240	240	245	290	280	260	300	280	290	250	240	220	240	260	270	300	p280a	265
22	260	280	p270a	270	270	265	250	250	255	230	250	270	280	230	250	240	230	250	260	260	280	260	280	p300a	260
23	p330a	350	320	290	290	270	250	250	240	290	280	280	270	310	225	250	260	245	250	220	260	300	360	290	p278
24	280	250	270	230	250	340	310	260	240	240	270	260	260	250	220	230	240	220	240	225	240	240	280	270	255
25	260	320	280	300	350	530	420	280	260	245	240	350	370	315	300	290	240	250	230	260	250	275	310	325	302
26	p330a	p340a	p320a	300	280	360	300	250	250	280	280	290	270	310	230	260	230	230	240	210	230	240	250	270	p273
27	280	290	270	270	260	270	250	240	235	270	280	270	250	310	220	250	250	230	230	230	230	225	240	250	p254
28	270	280	310	350	300	280	250	240	230	240	235	230	260	290	240	230	245	240	230	220	230	250	250	280	258
29	270	p270a	270	270	250	260	280	250	240	230	230	220	280	300	270	230	250	230	230	220	245	260	250	260	p253
30	240	270	270	275	280	275	250	230	230	230	230	260	270	270	270	260	250	230	225	240	250	240	240	250	251
31																									
MEAN*	291	300	284	277	268	293	276	247	245	256	268	278	282	288	272	265	250	240	233	234	246	254	270	278	266

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 45

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1939 APRIL 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.3	4.7	5.3	5.4	5.3	4.8	4.2	...	...	...
2	...	...	4.2	4.4	4.6	4.8	4.9	4.9	4.8	4.7	4.4	...	...
3	...	...	...	4.7	4.8	5.0	5.1	5.1	5.2	4.6	...	...	...
4	...	...	...	...	4.3	4.8	4.7	5.1	5.0	...	...	...	...
5	...	...	...	4.4	4.6	4.9	5.2	5.3	4.8	4.4	4.2	...	...
6	...	...	...	4.3	4.8	4.8	4.8	5.1	...c	...c	...	...	...
7	...	...	...	...	5.1	4.8	5.2	4.4	5.0	...	...	...	...
8	...	...	...	...	4.8	5.0	5.2	4.5	4.7	...	...	...	...
9	...	...	...	...	...	4.8	5.0	4.8	4.4	...	...	...	...
10	...	...	...	...	...	4.3	4.8	...a	...a	...a	...	...	...
11	...	...	...	4.7	4.5	4.8	5.0	4.7	4.6	4.4	...	...	...
12	...	...	...	4.4	4.6	4.9	4.4	4.7	4.8	4.4	4.0	...	...
13	...	...	...	...	...	5.2	5.1	4.8	4.4	4.1	4.0	...	...
14	...	...	...	...	4.7	4.8	5.2	5.0	...	...	...	...	...
15	...	...	...	4.4	4.7	5.4	...b	4.8	4.7	4.9	...	...	...
16	...	...	...	4.3	4.2	4.9	5.0	5.0	4.7	4.5	4.1	...	...
17	...	...	...	...	...	4.8	...	5.0	5.4	4.7	4.1	...	...
18	...	...	...	4.5	4.3	5.2	4.8	4.8	4.7	4.2	...	...	...
19	...	...	4.2	...	...	5.5	5.5	5.3	...	...	...	...	...
20	...	...	...	...	4.9	5.1	5.3	5.2	4.9	5.0	...	...	...
21	...	...	...	4.3	5.0	4.8	4.8	5.2	4.7	4.5	...	...	...
22	...	...	...	...	4.8	4.8	4.7	...	...	...	...	...	...
23	...	...	...	4.9	5.1	4.5	5.0	5.6	...	...	...	...	...
24	...	...	...	4.4	5.3	4.8	4.5	4.9	...	...	...	...	...
25	...	...	...	...	...	5.4	5.6	5.1	4.9	4.4	...	...	...
26	...	...	...	4.2	4.9	5.2	4.8	4.8	...	4.5	...	...	...
27	...	...	...	4.8	5.1	4.8	4.9	5.5	...	4.5	...	...	...
28	...	...	...	...	...	...	5.0	4.9	...	...	...	...	...
29	...	...	...	...	...	...	4.8	4.8	...	...	...	...	...
30	...	...	...	...	...	5.1	5.0	4.9	4.5	4.3	...	...	...
31													
MEAN*	...	...	4.2	4.5	4.8	5.0	5.0	5.0	4.8	4.5	4.1	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	220	200	200	210	230	240	250	...	...	...
2	...	...	240	230	280	250	220	240	250	240	250	...	...
3	...	...	...	240	230	220	220	230	220	240	...	...	...
4	...	...	...	...	210	210	260	230	240	...	...	...	...
5	...	...	...	225	215	220	220	210	235	230	230	...	...
6	...	...	...	230	220	215	210	205	...c	...c	...	...	...
7	...	...	...	...	220	230	210	210	215	...	...	...	...
8	...	...	...	...	220	215	210	210	240	...	...	...	...
9	...	...	...	...	...	225	220	230	220	...	...	...	...
10	...	...	...	...	...	225	210	...a	...a	...a	...	...	...
11	...	...	...	230	220	200	225	230	220	230	...	...	...
12	...	...	...	235	210	250	250	220	220	230	230	...	...
13	...	...	...	...	...	210	210	215	210	230	240	...	...
14	...	...	...	...	220	200	220	230	...	...	...	...	...
15	...	...	...	200	230	230	...b	230	250	240	...	...	...
16	...	...	...	210	200	200	250	240	230	225	230	...	...
17	...	...	...	...	...	220	...	245	240	250	240	...	...
18	...	...	...	230	230	230	230	220	230	240	...	...	...
19	...	...	240	...	...	260	230	250	...	...	...	...	...
20	...	...	...	...	230	230	250	240	240	230	...	...	...
21	...	...	...	250	210	210	220	230	230	230	...	...	...
22	...	...	...	...	230	220	220	...	...	...	...	...	...
23	...	...	...	240	250	230	250	250	...	...	...	...	...
24	...	...	...	220	220	220	200	230	...	...	...	...	...
25	...	...	...	...	...	220	240	235	240	230	...	...	...
26	...	...	...	240	230	210	230	230	...	230	...	...	...
27	...	...	...	210	230	220	220	210	...	240	...	...	...
28	...	...	...	...	...	...	230	220	...	...	...	...	...
29	...	...	...	...	...	...	220	200	...	...	...	...	...
30	...	...	...	...	...	220	220	220	225	230	...	...	...
31													
MEAN*	...	...	240	227	224	221	225	226	231	235	237	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^DF2 EQUAL TO OR LESS THAN f^DF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 46

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1939 — APRIL 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.7	0.7	0.8	1.0	1.0	1.0	0.9	1.0	0.8	0.7	0.5
2	...	0.7	0.8	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.0	0.8	0.6
3	...	0.6	0.6	0.6	1.1	1.1	1.1	1.3	1.2	1.1	1.0	0.7	0.5
4	...	0.7	0.8	1.0	1.0	1.1	1.1	1.2	1.0	0.9	1.0	0.8	0.5
5	...	0.5	1.0	1.0	1.1	1.2	1.2	1.1	1.1	1.2	1.0	0.9	0.5
6	...	0.6	0.7	0.8	1.0	1.1	1.2	1.1	...c	...c	1.1	1.0	1.0
7	...	0.8	0.6	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.8	0.5
8	...	0.6	0.7	0.7	0.9	1.0	1.0	1.0	0.9	0.7	0.7	0.6	...e
9	...	0.6	0.7	1.1	1.1	1.1	1.2	1.2	1.3	1.2	1.1	0.9	0.6
10	...	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.7	0.8	0.7	0.7	...e
11	...	0.6	0.7	0.8	1.0	1.0	1.1	1.1	0.9	0.8	0.8	0.7	...e
12	...	...e	0.6	1.0	0.7	0.8	1.0	0.7	1.0	0.7	0.6	0.8	0.6
13	...	0.6	0.7	0.8	0.8	0.8	1.0	1.1	1.0	1.0	0.8	0.6	0.6
14	...	0.6	0.8	0.8	1.1	1.0	1.1	1.2	2.4	2.0	1.0	0.6	...e
15	...	0.6	0.8	0.9	1.1	3.4	5.2	2.4	1.9	1.0	0.8	0.7	0.6
16	...	0.5	0.7	0.8	0.8	1.0	1.1	1.0	1.1	0.8	0.8	1.0	0.6
17	...	0.7	...c	1.0	1.1	1.2	1.4	1.2	1.0	1.0	0.8	0.6	0.6
18	...	0.6	0.6	0.7	0.8	0.9	0.8	0.9	0.8	1.0	0.8	0.6	0.7
19	...	0.6	0.7	1.0	1.1	1.1	1.1	1.1	1.1	1.2	0.7	0.6	...e
20	...	...e	0.8	1.2	1.1	1.3	2.1	1.1	1.1	1.2	0.7	0.8	...e
21	...	0.6	0.7	1.0	1.0	1.2	1.1	1.1	1.2	1.1	1.0	1.7	0.6
22	...	0.6	0.9	1.0	1.1	1.0	0.7	1.0	0.9	0.9	0.7	0.7	...e
23	...	0.6	0.8	1.2	1.0	1.0	1.2	1.2	1.0	1.0	0.8	0.7	...e
24	...	0.6	0.8	0.8	0.7	0.8	0.8	1.0	1.0	0.7	0.6	...e	...e
25	...	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.8	0.6
26	...	0.7	1.1	0.7	0.8	0.8	1.8	0.9	0.8	0.8	0.7	0.6	...e
27	...	0.6	1.1	1.1	1.2	1.1	1.1	1.4	1.2	1.1	1.0	0.8	...e
28	...	0.7	0.7	1.0	0.8	1.0	1.0	0.8	0.8	0.8	0.8	0.6	...e
29	...	0.7	0.7	1.0	1.0	1.1	1.1	1.1	0.8	0.8	4.4	0.8	...e
30	...	0.7	0.8	1.1	1.0	1.0	1.0	1.0	0.9	0.8	0.7	...e	0.7
31													
MEAN*	...	0.6	0.8	0.9	1.0	1.1	1.3	1.1	1.1	1.0	1.0	0.8	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.5	2.1	2.6	3.0	3.5	3.6	3.8	3.5	3.4	3.2	2.9	2.4	2.3
2	1.5	1.8	2.6	3.0	2.9	2.8	3.3	3.4	3.3	3.2	2.8	2.4	1.6
3	1.3	2.2	2.7	3.1	3.3	3.1	3.7	3.7	3.6	3.3	3.0	3.3	...a
4	0.8	2.1	2.6	3.1	3.2	3.4	3.5	3.5	3.3	3.1	2.6	2.1	1.7
5	1.1	2.2	2.6	3.0	3.2	3.5	3.3	3.3	3.2	3.3	2.9	2.4	1.5
6	1.0	2.0	2.7	3.0	3.3	3.3	3.2	p3.3c	p3.2c	p3.1c	3.0	2.4	1.6
7	1.3	2.2	2.9	3.3	3.3	3.5	3.3	3.6	3.5	3.0	3.2	2.6	1.7
8	1.6	2.0	2.7	3.0	3.2	3.5	3.4	3.6	3.3	3.0	2.9	2.1	1.3
9	1.2	1.9	2.7	2.9	3.5	3.6	3.7	3.9	3.1	3.0	2.9	2.1	1.3
10	...a	2.2	2.5	2.9	3.1	3.0	3.3	...a	...a	...a	2.9	3.0	...a
11	1.0	2.3	2.7	3.1	3.2	3.3	3.3	3.5	3.5	3.3	2.8	2.2	1.2
12	0.8	1.9	2.7	3.0	3.3	3.5	3.3	3.2	3.3	3.2	2.8	1.8	0.8
13	...a	1.3	2.9	3.2	3.4	3.7	3.7	3.7	3.5	3.3	2.8	2.4	1.4
14	1.2	2.2	2.7	3.2	3.4	3.9	3.9	3.8	3.8	3.6	3.1	2.3	1.4
15	...e	2.2	2.9	3.4	3.5	3.8	p3.6b	3.4	3.2	3.4	3.0	2.2	1.2
16	...e	2.1	2.8	3.0	3.3	3.5	3.6	3.5	3.4	3.3	2.9	2.6	1.4
17	1.0	2.2	...c	3.3	3.6	3.6	3.7	3.4	3.5	3.3	2.9	2.3	...a
18	0.8	2.4	2.6	3.0	3.2	3.1	3.4	3.3	3.3	3.0	2.8	2.2	1.4
19	...e	2.2	2.7	2.9	3.1	3.1	3.5	3.8	3.7	3.6	3.5	2.9	1.9
20	0.7	1.4	2.7	3.3	3.4	3.5	3.3	3.3	3.6	3.8	2.3	2.0	1.0
21	1.1	1.7	2.5	3.0	3.3	3.3	3.4	3.4	3.5	3.2	2.8	2.4	1.0
22	0.8	2.0	2.8	3.0	3.2	3.4	3.6	3.7	3.7	3.3	2.8	1.4	1.2
23	1.0	1.9	2.7	3.0	3.3	3.4	3.4	3.5	3.4	3.3	2.7	2.1	1.1
24	0.7	1.5	2.5	2.8	3.1	3.4	3.5	3.5	3.4	3.1	2.9	2.2	1.5
25	1.1	2.3	2.6	3.3	3.5	3.5	3.7	3.6	3.4	3.2	2.8	2.2	1.3
26	1.1	1.9	2.8	3.2	3.5	3.6	3.6	3.6	3.5	3.3	2.9	2.2	0.9
27	0.8	2.1	2.8	3.2	3.4	3.6	3.7	3.7	3.6	3.3	2.8	2.2	1.4
28	...e	2.1	2.6	3.2	3.5	3.7	3.6	3.6	3.4	3.3	2.8	2.6	1.9
29	0.8	2.2	2.7	3.2	3.4	3.6	3.6	3.5	3.3	2.9	p2.6b	2.3	1.2
30	0.8	2.2	2.8	3.3	3.5	3.6	3.7	3.7	3.5	3.4	2.8	2.2	1.8
31													
MEAN*	1.0	2.0	2.7	3.1	3.3	3.4	3.5	3.5	3.4	3.3	2.9	2.3	1.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 47

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.7	4.5	4.6	4.6	4.5	4.4	4.5	7.3	10.0	11.8	12.2	13.0	12.6	12.8	12.8	12.4	12.4	11.5	10.3	8.0	6.3	5.5	4.9	5.2	8.4
2	5.2	5.6	5.0	4.3	4.2	4.0	3.9	6.2	7.1	7.9	8.3	8.4	8.0	8.0	8.2	8.4	8.8	8.4	8.0	6.7	4.2	3.5	3.8	4.1	6.3
3	4.4	4.3	3.6	3.4	4.0	4.1	4.3	6.7	9.1	10.9	10.7	11.0	11.8	12.2	12.8	12.2	12.2	11.6	10.4	8.8	7.3	6.5	5.4	5.0	8.0
4	4.9	4.4	4.2	3.9	2.7	3.3	3.1	6.6	9.5	12.0	12.4	12.8	12.0	12.0	12.8	12.0	12.0	11.6	10.2	8.3	6.7	5.3	4.6	3.9	8.0
5	3.8	4.0	3.8	3.6	3.5	3.2	3.0	6.5	8.6	11.0	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	11.0	12.2	12.2	12.6	12.6	13.2	14.0	12.4	11.3	10.0	8.1	6.8	5.5	5.3	5.3	...
10	4.5	4.2	4.1	4.2	4.4	3.8	3.0	6.2	9.0	11.5	12.2	11.6	12.2	12.0	12.2	12.6	12.4	11.8	9.2	6.8	6.2	5.2	3.9	3.7	7.8
11	3.6	3.7	3.8	4.1	4.4	3.5	2.8	5.9	8.3	10.5	11.5	12.0	11.7	10.8	11.3	12.4	11.3	10.5	8.7	6.3	6.0	5.5	4.8	5.0	7.4
12	4.7	5.0	4.1	3.7	3.8	3.3	3.4	6.3	8.4	9.6	11.0	11.2	10.7	10.4	11.0	11.1	11.3	10.0	8.4	6.3	5.0	4.5	4.4	4.1	7.2
13	4.2	4.2	4.0	3.4	3.3	2.7	2.9	6.2	8.3	9.5	10.3	12.0	10.1	11.1	11.6	11.0	10.7	10.0	9.0	7.1	5.5	4.7	3.9	3.9	7.1
14	4.2	3.9	3.8	3.7	3.6	3.0	3.3	6.0	8.2	9.8	11.6	12.0	10.0	10.6	11.8	12.0	11.1	10.3	8.4	6.6	5.5	4.7	4.4	4.1	7.2
15	4.0	4.4	4.2	4.2	4.4	3.8	3.8	6.3	8.6	9.5	11.6	11.9	10.8	11.3	p..15c	p12.0c	10.8	10.7	9.1	6.5	5.3	4.7	4.4	4.4	p7.4
16	4.1	4.3	4.1	4.0	3.7	3.3	3.5	6.0	9.0	9.9	11.0	11.4	9.7	11.1	11.3	12.0	11.5	10.7	8.9	7.5	6.7	5.5	5.5	5.3	7.5
17	4.8	3.8	3.6	3.7	3.5	3.3	3.3	6.3	8.3	10.2	10.3	10.4	11.0	10.6	11.8	11.6	10.6	9.9	8.5	6.0	5.1	4.1	3.2	3.4	7.0
18	3.6	3.6	3.6	3.4	3.4	3.3	3.0	5.8	8.3	10.0	10.5	11.0	11.3	12.2	12.5	12.4	11.0	9.3	7.9	6.2	5.4	4.5	4.4	4.3	7.1
19	4.8	4.2	4.0	4.0	3.9	...c	...c	...c	...c	9.6	10.5	11.1	10.9	11.7	11.5	11.5	11.0	10.4	8.4	6.4	4.8	3.8	3.7	3.8	...
20	3.7	3.5	3.3	3.4	4.5	5.0	3.1	5.5	7.6	8.3	10.8	10.9	10.7	12.4	11.6	12.8	11.2	10.0	8.4	6.2	5.1	4.8	4.1	5.0	7.2
21	3.3	3.3	3.4	4.4	4.8	4.6	3.8	5.4	8.3	10.0	11.0	12.2	12.0	12.0	12.0	12.2	11.0	10.6	9.0	4.7	4.0	3.5	3.7	4.2	7.2
22	3.9	4.0	4.0	4.4	4.3	4.1	4.1	5.2	9.0	9.9	12.0	12.8	13.4	12.8	11.4	12.0	10.6	10.2	9.4	5.0	3.4	3.2	3.4	3.5	7.3
23	2.8	2.6	2.9	3.2	3.6	3.4	2.7	5.3	8.3	9.7	11.5	11.0	10.8	11.2	11.8	11.1	10.7	9.3	7.8	6.4	6.1	4.5	3.9	3.5	6.8
24	3.2	3.7	3.6	3.6	3.9	3.7	2.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
25	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
26	...	3.4	3.9	4.4	4.2	2.5	1.8	5.2	8.1	10.7	12.0	11.9	10.3	11.7	11.6	12.0	12.0	11.8	9.4	5.9	4.6	3.3	3.2	3.0	...
27	2.7	2.8	3.0	3.1	3.0	2.6	2.3	5.3	8.4	9.8	11.2	11.6	11.0	10.9	11.5	12.4	11.7	10.6	9.9	6.9	4.8	3.8	4.1	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.8	11.7	11.0	12.0	12.6	12.8	11.4	11.1	10.5	10.2	8.7	7.0	5.3	5.0	5.1	...
29	4.8	4.3	3.7	3.7	3.9	4.1	p4.0c	6.3	8.9	10.8	11.2	11.5	12.6	13.2	13.4	13.4	12.6	11.5	11.0	8.2	8.3	6.5	5.1	4.5	8.2
30	4.7	...c	...c	...c	...c	...c	...c	...c	...c	11.2	12.0	11.9	11.6	12.0	12.0	12.6	11.1	10.3	8.8	7.0	5.5	4.0	3.5	3.5	...
31	3.5	3.8	3.5	3.6	3.5	3.1	2.9	6.0	8.3	10.0	11.0	11.8	11.6	11.0	11.3	11.5	11.2	10.8	9.1	6.2	5.0	4.0	3.1	...c	...
MEAN*	4.1	4.0	3.8	3.8	3.9	3.6	3.3	6.0	8.5	10.2	11.2	11.5	11.3	11.6	p11.8	12.0	11.3	10.5	9.1	6.8	5.6	4.7	4.2	4.2	7.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 48

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MAY 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	280	280	260	260	260	250	240	240	240	215	230	220	230	230	240	240	230	215	200	250	300	280	350	250
2	320	280	230	275	340	320	280	300	255	320	350	370	410	350	370	350	290	250	250	220	250	260	320	360	305
3	290	280	240	260	270	300	270a	240	250	240	240	250	240	240	300	260	230	230	240	230	230	250	250	280	255
4	270	250	260	230	230	260	270	230	225	250	225	260	260	240	270	240	250	230	230	220	220	260	230	270	245
5	270	260	280	260	250	240	250	220	230	240	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	240	240	250	260	260	280	260	240	230	260	260	280..	...a	...a	250	...
10	260	265	280	290	260	220	250	220	230	240	230	240	270	250	230	260	250	250a	240a	240	250	240	235	270	249
11	260	260	300	260	260	225	260	225	230	240	230	270	240	230	240	250	230	220	230	220	260	250	280	280	248
12	260	250	230	250	250	250	260	215	230	240	250	260	250	260	230	230	250	230	220	230	230	250a	280	300	246
13	275	250	235	260	250	260	260	240	230	230	250	280	240	290	280	230	240	240	230	220	230	240	250	300	250
14	280	280	250	250	220	250	240	230	230	230	240	260	240	290	275	250	240	220	220	220	230	230	250	280	246
15	280	270	260	240	250	220	260	240	225	230	240	260	250	260	250c	240c	230	230	240	230	240	250	250	270	246
16	260	260	250	260	250	280	260	230	240	230	240	260	260	280	280	250	240	230	220	230	250	250	250	260	251
17	250	250	260	250	240	260	250	240	230	240	230	240	270	250	260	230	230	220	220	230	225	230	275	300	245
18	300	270	260	260	260	230	270	220	230	240	260	260	250	280	260	250	230	230	230	230	240	230	240	280	250
19	270	230	270	280	250	...c	...c	...c	...c	240	260	260	270	270	260	240	240	230	210	230	230	260	270	270	...
20	260	250	260	290	280	240	220	220	230	230	220	270	270	280	280	260	230	220	220	230a	240	250	240	240	247
21	220	260	280	280	260	230	210	220	230	230	240	250	270	260	290	220	230	230	210	210	260	260	300	290	248
22	270	280	300	270	260	240	240	260	230	250	240	270	260	250	250	250	230	220	210	210	240	280	300	260	253
23	250	250	320	270	250	230	240	240	240	240	250	250	250	280	270	250	220	220	215	235	230	230	230	240	246
24	260	270	280	280	240	230	250	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
25	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
26	300c	300	310	260	220	300	320	240	230	240	240	260	250	280	240	270	240	220	200	200	210	280	250	260	255
27	290	290	270	250	230	200	240	230	240	230	240	230	240	250	280	230	225	230	230	220	220	260	280	300c	246
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	240	220	220	280	240	240	210	240	240	230	220	220	220	240	250	...
29	230	230	240	240	250	240	250e	250	240	240	240	240	230	250	240	230	230	220	220	210	230	230	230	300	238
30	220	...c	...c	...c	...c	...e	...c	...c	...c	240	230	230	240	220	250	240	220	220	220	210	220	240	280	280	...
31	280	270	270	260	240	260	240	230	230	230	250	240	260	230	250	240	230	220	200	200	220	240	270	300c	244
MEAN*	268	264	267	262	253	250	254	235	234	241	243	256	259	261	264	247	237	228	224	222	236	250	262	282	250

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 49

MAY 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	5.0	5.2	5.2	5.6	5.5	5.4	5.1	4.1	...	...
3	...	...	...	...	...	...	...	...	5.4	5.0	...	...	...
4	...	...	...	...	...	5.0	5.2	...	...	...	...	...	...
5	...	...	...	...	...	...	...c	...	...	...	...	...	...
6	...	...	...	...	...	...	...c	...	...	...	...	...	...
7	...	...	...	...	...	...	...c	...	...	...	...	...	...
8	...	...	...	...	...	...	...c	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	5.2	4.2	...	...	...
10	...	...	...	...	...	4.7	4.8	4.9	...	...	...	...	...
11	...	...	...	...	...	5.1	...	...	...	...	...	...	...
12	...	...	...	...	...	4.9	4.8	5.2	...	...	...	...	...
13	...	...	...	...	4.8	5.5	4.8	5.2	5.2	...	...	...	...
14	...	...	...	...	...	4.8	4.7	5.2	...	...	...	...	...
15	...	...	...	...	...	4.8	4.8	...	...	...	...	...	...
16	...	...	...	...	...	4.5	4.7	4.3	4.5	...	...	...	...
17	...	...	...	...	...	4.6	5.0	4.8	...	...	...	...	...
18	...	...	...	...	5.0	4.6	p4.7a	4.7	4.4	...	...	...	...
19	...	...	...	...	4.4	4.5	4.6	4.5	4.1	...	...	...	...
20	...	...	...	...	...	4.8	5.5	4.8	4.5	4.2	...	...	...
21	...	...	...	...	...	4.9	4.9	4.7	4.7	...	...	...	...
22	...	...	...	...	...	4.8	4.5	4.6	...	...	...	...	...
23	...	...	...	...	4.1	4.6	4.4	4.5	4.3	4.0	...	...	...
24	...	...	...	...	...	...	...c	...	...	...	...	...	...
25	...	...	...	...	...	...	...c	...	...	...	...	...	...
26	...	...	...	...	4.3	4.4	4.9	p5.0a	5.0	4.0	...	...	...
27	...	...	...	...	...	...	4.5	4.1	4.6	...	...	...	...
28	...	...	...	...	...	...	4.7	4.8	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	4.6	...	...	...	...	...	...
* MEAN	...	...	...	5.0	4.6	4.8	4.8	4.8	4.8	4.4	4.1	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	250	260	250	240	240	250	250	260	...	...
3	...	...	...	...	...	...	...	...	220	230	...	...	...
4	...	...	...	...	...	240	230	...	...	...	...	...	...
5	...	...	...	...	...	...	...c	...	...	...	...	...	...
6	...	...	...	...	...	...	...c	...	...	...	...	...	...
7	...	...	...	...	...	...	...c	...	...	...	...	...	...
8	...	...	...	...	...	...	...c	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	230	250	...	...	...
10	...	...	...	...	...	220	220	230	...	...	...	...	...
11	...	...	...	...	...	230	...	...	...	...	...	...	...
12	...	...	...	...	...	230	240	220	...	...	...	...	...
13	...	...	...	...	230	230	230	220	260	...	...	...	...
14	...	...	...	...	...	230	220	210	...	...	...	...	...
15	...	...	...	...	...	230	230	...	...	...	...	...	...
16	...	...	...	...	...	240	220	230	225	...	...	...	...
17	...	...	...	...	...	220	220	230	...	...	...	...	...
18	...	...	...	...	220	220	...a	210	230	...	...	...	...
19	...	...	...	...	230	230	210	200	240	...	...	...	...
20	...	...	...	...	...	250	230	230	240	230	...	...	...
21	...	...	...	...	...	230	220	230	225	...	...	...	...
22	...	...	...	...	...	220	220	220	...	...	...	...	...
23	...	...	...	...	220	220	215	230	240	215	...	...	...
24	...	...	...	...	...	...	...c	...	...	...	...	...	...
25	...	...	...	...	...	...	...c	...	...	...	...	...	...
26	...	...	...	...	230	220	230	...a	220	215	...	...	...
27	...	...	...	...	...	...	220	220	240	...	...	...	...
28	...	...	...	...	...	...	220	210	...	...	...	...	...
29	...	...	...	...	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...
31	...	...	...	...	...	...	230	...	...	...	...	...	...
* MEAN	...	...	...	250	232	230	225	222	235	232	260	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 50

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1939 MAY 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.8	1.0	1.2	1.0	1.0	0.8	0.8	0.8	0.8	0.9	0.7	0.6
2	...	0.8	0.8	1.0	1.0	0.8	0.9	0.8	0.8	0.8	0.6	...e	...e
3	...	0.8	0.7	0.9	1.2	0.9	0.8	0.8	0.9	0.8	0.8	0.7	...e
4	...	0.6	0.7	1.1	1.0	1.1	1.5	1.2	1.2	1.1	0.7	...e	...e
5	...	0.9	0.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
6	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
7	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
8	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
9	...	...c	...c	1.0	0.9	1.0	1.0	1.0	0.7	1.0	0.8	0.6	...e
10	...	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.9	0.8	0.7	...e	...e
11	...	0.8	0.6	0.8	0.8	1.0	1.0	1.0	0.9	1.1	1.0	0.8	0.7
12	...	0.8	0.7	0.7	0.8	0.9	1.0	0.8	0.8	0.8	0.8	0.6	...e
13	...	0.8	0.7	0.9	1.0	0.9	0.8	0.9	0.9	0.9	0.8	0.6	...e
14	...	0.8	0.9	1.0	1.0	1.0	0.8	0.8	0.9	0.8	0.8	0.7	0.6
15	...	0.8	0.8	0.9	0.7	0.7	0.6	0.8	p0.8c	p0.8c	0.8	0.7	0.6
16	...	0.9	0.7	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.7	0.7	0.5
17	...	...e	0.8	1.0	1.1	1.0	0.8	1.0	0.9	0.8	0.9	0.9	0.6
18	...	0.6	0.9	0.8	1.0	1.1	0.8	1.0	1.0	1.0	0.8	0.6	...e
19	...	...c	...c	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6	0.8
20	...	...e	0.7	0.6	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...e
21	...	0.6	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6
22	...	...e	1.1	0.7	1.1	0.8	0.9	0.9	0.8	0.8	0.7	0.6	...e
23	...	...e	0.7	0.8	1.2	1.0	0.8	0.8	0.8	0.8	0.8	0.6	0.6
24	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
25	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
26	...	0.7	0.8	1.1	1.1	1.0	1.1	1.0	1.0	0.8	0.9	0.7	...e
27	...	0.9	0.8	0.8	0.7	1.0	0.9	0.9	0.8	0.8	0.7	0.8	...e
28	...	...c	...c	1.1	0.8	1.0	0.9	0.9	0.8	0.8	0.6	0.6	0.6
29	...	0.6	0.9	1.0	1.0	1.1	1.0	1.0	0.8	0.8	0.8	0.6	...e
30	...	...c	...c	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.7	...e
31	...	0.6	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.5
MEAN*	...	0.7	0.8	0.9	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.8	1.8	2.8	3.1	3.5	3.8	3.7	3.8	3.6	3.3	3.0	2.2	1.4
2	1.2	2.1	2.7	3.2	3.4	3.5	3.6	3.6	3.5	3.2	2.7	2.2	1.9
3	...a	2.1	2.8	3.2	3.5	3.6	3.7	3.7	3.6	3.3	2.9	2.2	1.0
4	0.8	2.0	2.7	3.5	3.6	3.8	3.8	3.7	3.6	3.3	2.6	2.2	1.4
5	0.8	2.1	2.8	3.5	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	3.0	3.3	3.4	p3.4a	3.5	3.5	2.7	3.0	2.6	p2.3a
10	1.1	2.1	3.0	3.0	3.4	3.6	2.3	3.7	3.5	...a	...a	...a	...a
11	1.2	2.1	2.9	3.3	3.5	3.7	3.6	3.7	3.4	3.3	2.6	2.4	p2.0a
12	1.0	2.2	2.9	3.2	3.3	3.5	3.7	3.5	3.5	3.2	2.7	2.1	1.4
13	0.8	2.1	2.8	3.1	3.4	3.6	3.7	3.5	3.7	3.2	2.8	1.9	1.4
14	0.8	2.0	2.9	3.1	3.6	3.6	3.7	3.6	4.0	3.3	2.7	2.0	1.5
15	0.8	2.0	2.6	3.3	3.3	3.3	3.5	3.6	p3.4c	p3.2c	2.7	2.0	1.9
16	1.0	2.1	2.6	3.0	3.3	3.5	3.3	p3.4a	3.4	3.1	2.7	2.0	1.0
17	0.9	1.5	2.5	3.0	3.2	3.5	3.5	3.5	3.4	3.0	2.6	2.0	1.0
18	1.0	2.0	2.9	2.9	3.5	3.3	p3.4a	3.5	3.3	3.0	2.4	2.0	1.0
19	...c	...c	...c	2.9	3.3	3.3	3.4	3.4	3.4	3.2	2.7	2.0	1.0
20	0.8	1.9	2.6	3.0	3.1	3.5	3.4	3.2	3.2	3.0	2.5	2.0	1.0
21	0.8	1.8	2.5	2.9	3.2	3.5	3.3	3.5	3.2	3.0	2.6	1.9	1.5
22	1.0	1.5	2.7	3.1	3.2	3.3	3.5	3.5	3.3	3.0	2.6	2.0	1.0
23	1.0	1.8	2.6	3.0	3.2	3.4	3.4	3.4	3.2	3.0	2.6	2.0	1.1
24	1.0	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...	...
26	1.0	1.8	2.5	2.6	3.0	3.5	3.7	p3.5a	3.4	3.0	2.7	1.9	1.4
27	0.9	2.0	2.5	3.0	3.3	3.4	3.6	3.5	3.3	2.9	2.2	2.6	2.1
28	...	...	...	3.1	3.4	3.5	3.6	3.6	3.3	3.1	2.7	2.0	1.1
29	p1.0c	1.5	2.6	3.0	3.3	3.8	3.7	3.5	3.4	3.2	2.7	2.6	1.3
30	...c	...c	...c	3.0	3.5	3.5	3.5	3.5	3.0	3.3	2.5	2.0	0.8
31	1.2	1.9	2.4	3.0	3.3	3.8	3.8	3.5	3.4	3.2	2.8	1.8	1.0
MEAN*	1.0	1.9	2.7	3.1	3.3	3.5	3.5	3.5	3.4	3.1	2.7	2.1	1.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 51

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1939 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JUNE 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	3.6	3.6	4.0	...c	...c	...c	...c	...c	...c	11.4	11.0	11.4	10.9	...c	11.4	10.7	9.3	7.9	6.0	4.9	3.7	3.7	4.1	...
2	4.3	4.3	4.3	4.6	4.9	4.2	3.4	5.6	8.0	9.0	10.7	11.8	11.0	11.2	11.5	11.6	11.2	9.8	8.4	8.4	6.0	5.1	4.6	4.2	7.5
3	4.2	4.1	4.3	4.4	4.4	3.6	3.4	5.1	p7.5c	10.0	10.0	10.5	11.1	10.6	11.2	11.5	11.5	10.3	9.8	...c	...c	...c	...c	...c	...
4	3.8	3.5	3.5	3.4	3.4	3.4	2.9	5.3	p8.0c	10.3	10.3	10.7	11.0	11.4	11.6	11.7	11.6	10.1	9.6	7.2	5.4	4.1	4.2	4.2	7.1
5	4.5	4.3	...c	...c	...c	...c	...c	...c	...c	9.5	10.5	10.6	11.0	11.0	11.8	11.3	10.7	9.3	8.4	6.5	5.5	4.0	3.6	3.7	...
6	3.6	3.7	4.0	4.3	4.6	4.0	3.5	5.3	8.4	9.7	9.8	10.6	10.0	10.2	11.2	10.9	10.0	9.9	7.6	6.4	5.3	3.4	3.5	3.3	6.8
7	3.3	3.5	3.8	3.8	...c	...c	...c	...c	...c	8.7	9.8	10.8	10.0	10.2	9.9	10.8	10.0	9.4	7.6	5.2	4.5	3.7	3.1	3.2	...
8	3.5	3.5	3.9	3.6	3.7	3.8	3.8	5.5	7.7	9.4	10.7	10.5	10.4	10.1	10.7	9.6	8.4	8.1	6.5	6.1	5.5	5.0	4.0	3.6	6.6
9	3.4	3.4	3.5	3.7	3.9	3.8	3.7	5.5	8.0	9.2	9.8	10.0	9.4	9.2	9.0	9.9	9.0	8.8	7.3	4.5	3.9	3.3	3.4	3.4	6.2
10	3.6	3.3	3.6	3.6	3.7	3.8	3.7	5.1	7.7	3.1	9.2	9.5	9.6	9.0	8.8	10.2	10.0	8.4	6.6	5.7	4.9	3.8	3.6	3.4	6.2
11	3.2	3.6	3.6	4.0	4.1	4.0	4.0	5.5	7.7	9.0	9.0	8.7	9.7	9.7	10.0	9.2	8.7	9.4	8.2	5.2	3.4	3.3	3.6	3.7	6.3
12	4.2	4.5	4.3	4.0	4.2	4.4	4.3	5.2	7.3	8.9	8.4	8.9	8.8	8.4	p8.5c	p9.0c	9.5	9.0	5.5	5.4	4.3	3.7	3.5	3.5	p6.2
13	3.7	3.6	3.9	4.0	4.0	3.7	3.4	5.0	7.3	9.2	9.6	8.4	8.4	8.7	p9.0c	9.4	9.4	8.4	6.9	5.9	4.6	3.8	3.7	3.6	6.2
14	4.0	4.1	4.3	4.1	4.7	3.9	3.6	5.1	6.9	9.8	10.8	8.8	12.2	10.5	11.9	11.9	9.5	9.0	8.7	6.7	6.6	5.3	4.6	4.0	7.1
15	3.8	4.2	3.8	3.9	4.0	3.2	2.7	5.2	8.2	9.5	10.2	10.5	10.8	10.6	10.6	10.3	9.7	9.8	7.9	6.3	4.4	3.4	3.0	3.6	6.6
16	3.9	4.2	4.0	4.0	4.6	3.4	3.4	5.0	7.5	8.2	9.1	10.0	9.8	10.9	11.6	12.1	11.9	10.7	8.7	6.6	4.4	3.9	3.9	4.0	6.9
17	3.3	3.3	3.6	4.2	4.5	3.5	2.5	4.4	7.6	8.5	10.0	9.9	8.4	9.2	9.4	10.3	9.6	8.8	7.8	5.0	3.3	3.2	2.6	2.4	6.0
18	2.8	3.0	3.1	3.3	3.6	3.1	2.8	4.6	7.3	9.2	9.9	9.7	10.2	10.2	11.0	11.4	10.8	8.6	6.7	5.3	3.7	3.7	3.6	3.6	6.3
19	3.1	3.2	3.2	3.8	4.0	3.3	3.0	4.6	6.7	8.3	9.2	10.9	10.8	10.3	9.8	10.5	10.0	8.9	6.4	4.2	3.8	3.5	3.7	3.9	6.2
20	3.8	3.9	3.8	3.5	3.5	3.0	3.0	4.8	7.7	9.5	10.0	9.1	9.2	9.6	10.5	10.7	9.4	9.0	7.2	6.2	5.0	3.4	3.0	3.6	6.4
21	3.8	3.5	3.7	3.6	3.6	3.7	3.2	5.0	7.1	8.8	10.9	10.4	9.5	9.0	10.0	9.8	9.5	8.4	6.3	4.3	3.7	3.0	3.5	3.6	6.2
22	4.8	4.0	3.6	3.0	2.4	2.3	2.8	4.7	7.8	9.4	9.4	9.3	9.6	9.4	10.2	10.9	11.0	9.9	8.2	5.9	3.6	2.8	3.0	3.4	6.3
23	3.4	3.2	3.5	3.8	3.9	3.6	2.9	5.5	7.1	8.7	10.8	10.0	10.1	9.7	9.9	9.9	10.5	9.5	6.6	5.0	3.7	3.3	3.2	3.1	6.3
24	3.3	3.2	3.3	3.3	3.9	3.7	2.9	4.4	7.1	p8.5c	p9.0c	9.8	10.5	9.6	10.0	9.6	8.9	8.0	6.7	4.5	4.6	4.9	3.6	3.5	p6.1
25	3.7	3.7	3.6	3.6	3.5	3.3	3.5	5.0	8.0	8.6	9.9	9.4	8.5	9.3	8.8	9.7	9.3	8.6	6.5	4.4	3.7	3.8	3.1	3.2	6.0
26	3.3	3.4	3.5	3.3	3.6	3.3	3.3	5.2	7.5	8.9	8.1	9.9	9.0	9.5	8.7	9.6	9.2	8.8	6.7	5.3	4.7	4.3	3.6	3.7	6.1
27	3.7	3.6	3.6	3.5	3.9	3.2	3.5	5.2	p7.5c	8.8	10.4	9.2	9.2	8.9	8.6	8.8	9.7	9.4	7.9	5.4	5.0	4.3	4.0	3.9	p6.3
28	3.2	3.5	3.6	3.8	3.6	4.0	3.5	5.5	7.5	8.2	8.9	9.1	9.9	9.8	8.8	9.7	9.7	8.9	6.5	5.1	3.6	3.1	3.2	3.3	6.1
29	3.6	3.7	3.8	3.6	3.6	3.5	3.3	4.8	7.4	9.0	10.0	10.3	9.4	9.5	11.0	10.8	9.9	9.8	7.6	6.5	4.6	4.4	4.7	4.5	6.6
30	4.5	4.8	4.5	3.9	3.5	3.3	3.7	5.6	8.5	8.7	10.0	9.2	10.1	9.6	9.2	9.6	9.1	8.7	7.9	6.2	3.5	3.3	3.3	3.5	6.4
31																									
MEAN*	3.7	3.7	3.8	3.8	3.9	3.6	3.3	5.1	7.6	9.0	9.9	9.9	10.0	9.9	10.1	10.4	10.0	9.2	7.5	5.7	4.5	3.8	3.6	3.6	6.5

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 52

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	270	270	280	...c	...c	...c	...c	...c	...c	260	250	240	250	p260c	270	240	220	210	200	220	270	290	300	...
2	290	280	280	270	250	225	250	250	230	250	240	230	230	220	220	250	230	220	240	250	230	230	240	250	244
3	290	300	290	290	270	225	270	230	...c	240	230	230	270	230	220	250	250	240	220	...c	...c	...c	...c	...c	...
4	260	280	270	280	260	230	220	220	p220c	225	250	250	240	260	270	240	230	230	220	210	220	230	280	280	p245
5	260	260	...c	...c	...c	...c	...c	...c	...c	240	230	260	240	260	230	230	230	220	210	230	240	240	260	p270a	...c
6	270	280	290	250	240	230	260	240	230	230	230	240	230	250	280	260	230	230	200	220	230	220	270	220	243
7	230	270	260	260	...c	...c	...c	...c	...c	230	240	250	250	270	230	250	240	220	200	210	250	240	250	280	...
8	280	270	260	300	280	270	240	230	230	230	250	240	260	230	250	240	220	220	240	250	230	230	230	250	247
9	240	280	260	260	250	230	250	230	230	240	240	260	240	260	280	240	230	240	200	220	260	270	270	280	248
10	260	250	260	270	260	250	225	230	230	240	230	250	260	240	260	270	230	220	215	220	240	220	250	250	243
11	250	270	280	270	250	240	240	240	220	250	260	250	260	260	270	220	240	230	220	210	220	270	240	260	247
12	270	260	230	250	260	250	220	240	240	250	230	230	260	260	p260c	p250c	250	225	210	250	220	230	250	250	p244
13	250	270	280	260	230	250	230	230	230	230	240	240	260	260	p260c	230	260	220	220	215	230	230	250	240	p242
14	270	280	240	265	230	230	290	230	230	250	240	280	280	240	270	250	225	240	250	230	230	230	210	270	248
15	300	290	300	280	230	240	250	250	220	240	230	240	260	270	270	250	230	240	220	220	210	230	220	275	249
16	275	270	250	260	240	210	230	240	230	225	270	280	260	270	220	230	230	215	220	220	220	250	290	230	243
17	290	310	310	250	240	220	210	270	230	240	270	240	240	260	270	240	230	220	220	210	220	250	250	290	249
18	300	290	260	280	260	250	230	240	230	240	260	270	280	260	260	280	240	210	215	230	230	260	260	260	254
19	250	270	300	280	250	220	270	230	230	230	230	240	300	300	310	240	250	220	210	210	230	260	280	250	252
20	250	260	240	250	250	260	290	260	230	240	220	260	250	250	280	230	230	220	210	240	230	230	300	275	248
21	250	270	240	270	260	240	240	240	230	260	230	250	330	265	280	240	240	p230a	220	250	230	290	260	280	p254
22	270	260	230	230	270	280	260	220	230	230	230	260	260	240	280	280	230	220	p230a	240	p260a	p280a	290	280	p252
23	p290a	p290a	290	280	270	230	250	230	230	240	260	260	260	250	260	250	250	230	200	210	230	250	210	280	p250
24	270	250	240	240	260	220	230	240	230	p240c	p250c	260	240	260	260	230	230	230	210	220	220	250	230	260	p240
25	260	260	250	230	230	260	260	250	230	240	270	250	250	240	250	250	240	220	210	225	220	250	240	250	243
26	270	240	250	240	260	230	230	250	230	240	240	260	300	280	260	280	230	230	200	230	250	250	260	260	249
27	260	260	260	240	240	220	260	250	p240c	240	260	240	260	250	250	260	250	225	200	250	240	230	270	240	p246
28	240	290	290	270	260	250	240	240	230	230	230	250	250	260	250	280	250	220	200	220	230	250	290	280	250
29	250	250	270	240	280	270	230	250	250	240	260	270	260	300	310	250	230	230	210	240	220	280	270	290	256
30	270	270	215	230	230	280	265	250	250	230	240	250	260	260	250	240	230	230	270	220	220	320	280	p290a	p252
31																									
MEAN*	266	272	264	261	252	241	246	240	231	238	244	251	259	257	261	249	236	226	217	226	230	250	258	265	248

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 53

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	5.0	...	...	...	4.0	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	4.8	...	...	...	...	...	...
4	...	...	...	...	...	...	...	4.8	4.3	4.5	...	...	...
5	...	...	...	...	...	4.8	4.5	4.6	...	...	...	...	...
6	...	...	...	...	...	...	...	4.5	4.6	4.0	...	...	...
7	...	...	...	...	...	5.5	4.6	4.6	...	...	...	...	...
8	...	...	...	...	4.3	4.8	4.7	...	...	...	...	...	...
9	...	...	...	...	...	4.7	4.5	4.6	5.0	...	...	...	...
10	...	...	...	...	...	4.6	4.8	4.4	4.3	4.6	...	...	...
11	...	...	...	...	...	4.3	4.2	5.6	4.4	...	...	...	...
12	...	...	...	...	...	...	4.7	5.0	...	...	...	...	...
13	...	...	...	...	...	...	...	5.2	...	...	...	...	...
14	...	...	...	...	...	4.8	4.9	4.4	4.6	...	...	...	...
15	...	...	...	...	...	4.8	4.4	4.5	4.6	4.3	...	...	...
16	...	...	...	...	4.5	4.7	4.6	4.6	...	...	...	...	...
17	...	...	...	...	4.5	4.6	4.7	4.8	4.6	...	...	...	...
18	...	...	...	...	4.5	4.5	4.6	4.7	4.7	4.8	...	...	...
19	...	...	...	...	...	...	5.1	5.3	5.6	...	...	...	...
20	...	...	...	...	...	5.2	4.9	...	5.1	...	...	...	...
21	...	...	...	...	...	4.5	5.5	4.8	4.8	...	...	...	...
22	...	...	...	...	...	4.5	4.5	4.5	4.4	4.0	...	...	...
23	...	...	...	...	4.5	5.0	4.9	4.5	4.4	...	...	...	...
24	...	...	...	...	...	4.5	4.8	4.8	4.5	...	...	...	...
25	...	...	...	3.8	4.2	5.1	5.2	4.5	4.0	4.1	...	...	...
26	...	...	...	...	...	4.6	5.5	4.8	4.2	4.5	...	...	...
27	...	...	...	...	...	4.5	4.6	4.7	4.2	4.3	...	...	...
28	...	...	...	...	...	...	...	4.8	4.3	4.3	...	...	...
29	...	...	...	...	4.5	4.4	4.6	4.9	4.9	...	...	...	...
30	...	...	...	...	4.3	4.5	4.7	4.6	...	...	...	...	...
31													
* MEAN	...	...	...	3.8	4.4	4.7	4.8	4.7	4.6	4.3	...	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	240	...	...	...	220	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	230	...	...	...	...	...	...
4	...	...	...	...	...	...	...	230	220	220	...	...	...
5	...	...	...	...	...	220	220	240	...	...	...	...	...
6	...	...	...	...	...	...	...	220	230	230	...	...	...
7	...	...	...	...	...	220	230	230	...	...	...	...	...
8	...	...	...	...	240	220	230	...	...	...	...	...	...
9	...	...	...	...	...	230	220	250	230	...	...	...	...
10	...	...	...	...	...	220	230	210	225	225	...	...	...
11	...	...	...	...	...	200	240	230	230	...	...	...	...
12	...	...	...	...	...	...	230	200	...	...	...	...	...
13	...	...	...	...	...	...	...	240	...	...	...	...	...
14	...	...	...	...	...	225	240	220	210	...	...	...	...
15	...	...	...	...	...	230	210	250	230	220	...	...	...
16	...	...	...	...	200	210	220	250	...	...	...	...	...
17	...	...	...	...	230	230	220	200	210	...	...	...	...
18	...	...	...	...	240	230	220	225	240	230	...	...	...
19	...	...	...	...	...	...	230	220	230	...	...	...	...
20	...	...	...	...	...	200	220	...	200	...	...	...	...
21	...	...	...	...	...	220	210	220	230	...	...	...	...
22	...	...	...	...	...	215	220	220	230	210	...	...	...
23	...	...	...	...	200	230	220	230	200	...	...	...	...
24	...	...	...	...	...	220	210	200	200	...	...	...	...
25	...	...	...	220	230	230	200	230	210	230	...	...	...
26	...	...	...	...	...	230	230	230	230	230	...	...	...
27	...	...	...	...	...	230	210	230	220	250	...	...	...
28	...	...	...	...	...	...	...	230	220	240	...	...	...
29	...	...	...	...	230	220	220	230	230	...	...	...	...
30	...	...	...	...	210	230	230	230	...	...	...	...	...
31													
* MEAN	...	...	...	220	222	223	222	227	221	228	...	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 54

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	...c	0.7	1.0	1.1	1.0	...c	0.9	0.8	0.7	0.5
2	...	...e	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.6	0.8	0.6
3	...	0.6	p0.7c	1.0	1.1	1.0	1.1	1.0	1.0	0.8	0.7	0.6	...e
4	...	...c	...c	1.1	1.0	0.9	0.8	0.9	0.9	0.8	0.8	0.6	...e
5	...	...c	...c	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.6	...e
6	...	0.8	1.1	0.7	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.6	...e
7	...	...c	...c	0.9	0.8	0.8	0.9	0.8	0.6	0.5	0.7	0.5	...e
8	...	0.9	0.7	0.8	0.8	0.8	1.0	1.1	1.0	0.9	0.9	0.7	...e
9	...	...e	0.6	0.7	0.9	0.9	0.6	0.8	0.8	0.8	0.8	...e	...e
10	...	0.6	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	...e
11	...	...e	...e	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	...e
12	...	0.6	0.7	0.7	0.9	0.8	0.9	0.8	p0.8c	p0.7c	0.6	0.6	...e
13	...	...e	...e	...e	0.7	...e	0.8	0.8	p0.8c	0.8	0.7	0.7	0.6
14	...	0.6	1.0	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.6	...e
15	...	0.6	0.6	0.6	0.8	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.6
16	...	...e	0.7	0.7	0.8	0.9	1.0	1.0	1.1	0.7	0.6	0.6	...e
17	...	0.6	0.6	0.5	0.5	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.8
18	...	0.6	0.6	1.0	0.7	0.8	0.8	0.8	0.8	0.6	0.5	0.7	0.6
19	...	...e	0.7	0.7	0.8	1.0	0.8	0.8	0.6	0.9	0.6	0.6	...e
20	...	0.6	0.9	0.8	0.8	0.8	0.7	...e	0.6	0.6	...e	0.6	...e
21	...	0.6	0.7	0.7	0.8	0.7	0.9	0.9	0.9	0.7	0.7	0.6	0.6
22	...	...e	0.6	0.8	1.0	0.8	1.0	1.1	0.9	0.9	0.8	0.8	0.6
23	...	0.6	0.7	0.8	0.8	0.9	1.1	1.0	0.9	0.8	0.7	0.6	...e
24	...	...e	0.7	p0.7c	p0.8c	0.8	0.9	0.9	0.9	0.7	0.7	...e	...e
25	...	...e	0.7	1.0	0.8	0.7	1.0	0.9	0.7	0.9	0.8	0.6	...e
26	...	0.6	...e	0.6	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.8	...e
27	...	...e	p0.7c	0.9	0.8	0.6	0.9	0.8	0.8	0.9	0.8	0.6	...e
28	...	...e	1.1	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	...e
29	...	0.7	0.8	0.8	1.1	1.1	0.9	0.9	1.0	1.0	0.8	0.7	...e
30	...	0.6	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.7
31													
MEAN*	...	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...c	...c	...c	...c	3.3	3.6	3.6	3.5	p3.4c	3.2	2.8	1.9	1.0
2	0.7	2.0	2.6	3.1	3.3	3.6	3.7	3.6	3.4	3.1	2.6	1.9	0.8
3	0.8	2.0	...c	3.2	3.3	3.4	3.6	3.6	3.4	3.3	2.7	2.2	...a
4	0.8	1.8	p2.5c	3.0	3.3	3.5	3.5	3.5	3.5	2.9	2.6	1.8	0.9
5	...c	...c	...c	3.0	3.3	3.3	3.5	3.6	3.3	3.0	2.6	2.0	...
6	...e	1.7	2.5	3.1	3.2	3.2	3.5	3.5	3.3	3.1	2.7	2.1	1.1
7	...c	...c	...c	3.1	3.3	3.6	3.7	3.6	3.4	3.2	2.6	1.8	1.2
8	0.9	1.8	2.5	2.9	3.3	3.5	3.7	3.5	3.2	3.0	2.6	1.9	p1.3a
9	0.8	1.8	2.7	2.9	3.2	3.4	3.5	3.5	3.4	3.1	2.5	1.9	1.1
10	0.8	1.9	2.5	3.2	3.2	3.3	3.5	3.4	3.2	3.0	2.6	2.0	1.3
11	0.9	1.8	2.5	3.2	3.2	3.4	3.5	3.4	3.4	3.1	2.5	2.0	1.0
12	0.8	1.8	2.5	2.8	3.2	3.3	3.4	3.4	...c	...c	2.5	1.8	...a
13	0.8	1.8	2.6	3.1	3.2	3.3	3.5	3.4	p3.3c	3.1	2.6	1.8	0.8
14	0.8	1.8	2.4	3.0	3.2	3.3	3.6	3.3	3.2	3.0	2.5	1.9	1.5
15	0.9	1.8	2.4	3.0	3.0	3.3	3.4	3.5	3.3	2.9	2.4	1.9	1.6
16	0.8	1.8	2.6	3.0	3.6	3.7	3.6	3.3	3.3	2.7	2.5	2.0	1.5
17	1.2	1.8	2.7	3.1	3.5	3.5	3.5	3.4	3.2	3.1	2.5	1.6	1.0
18	0.8	1.6	2.6	3.1	3.5	3.3	3.5	3.3	3.3	3.0	2.5	1.9	1.3
19	1.0	1.6	2.4	3.0	3.3	3.5	3.3	3.5	3.7	2.7	2.6	1.9	1.5
20	0.6	1.6	2.4	2.8	3.1	3.3	3.5	3.1	3.7	3.0	2.5	1.8	1.1
21	0.7	1.5	2.5	3.0	3.3	3.6	3.3	3.4	3.5	3.0	2.7	p2.2a	2.0
22	0.9	1.8	2.5	2.9	3.4	3.5	3.5	3.5	3.5	3.0	2.8	1.9	...a
23	1.0	1.7	2.7	3.2	3.1	3.4	3.4	3.3	3.3	3.5	2.7	1.9	...a
24	1.1	1.7	2.7	p3.0c	p3.1c	3.3	3.4	3.3	3.3	3.0	2.5	1.9	1.2
25	0.8	1.6	2.6	2.9	3.3	3.4	3.9	3.3	3.4	3.1	2.7	1.8	0.9
26	0.8	1.5	2.4	3.3	3.3	3.4	3.4	3.6	3.4	3.1	2.7	2.0	1.1
27	0.8	1.8	p2.5c	3.1	3.3	3.4	3.6	3.6	3.6	3.2	2.8	1.7	0.9
28	0.8	1.7	2.5	2.9	3.3	3.3	3.3	3.4	3.3	3.0	2.8	1.8	0.9
29	1.1	1.6	2.7	3.0	3.3	3.3	3.4	3.4	3.2	3.0	2.6	2.0	0.8
30	0.7	1.8	2.7	2.8	3.2	3.4	3.5	3.5	3.3	3.0	2.6	1.9	p1.3a
31													
MEAN*	0.8	1.7	2.6	3.0	3.3	3.4	3.5	3.4	3.4	3.0	2.6	1.9	1.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 55

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1939

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	3.6	3.3	3.7	3.7	2.6	2.4	4.7	7.1	9.0	9.6	8.8	10.5	9.4	10.2	10.3	8.6	9.8	8.4	4.7	3.8	3.4	4.0	4.0	6.2
2	3.6	3.7	3.5	3.9	4.2	3.8	3.4	5.0	7.6	8.7	9.0	8.5	9.9	9.1	10.2	9.7	9.6	8.8	6.8	5.8	5.1	4.2	4.2	3.4	6.3
3	3.2	3.3	3.7	3.2	3.5	3.3	2.6	4.9	6.9	8.3	9.8	9.4	9.3	9.3	10.4	10.3	8.9	8.7	7.7	7.0	6.1	4.6	4.6	4.6	6.4
4	4.7	4.9	4.4	3.2	3.1	3.0	3.3	5.5	8.9	8.8	9.9	9.2	9.3	8.4	8.9	8.4	9.5	8.0	7.2	4.9	3.9	3.0	2.9	3.0	6.1
5	3.2	3.5	3.3	3.8	3.4	2.8	2.0	4.5	7.7	8.8	10.4	10.4	10.4	10.5	12.3	12.3	11.9	12.2	9.9	7.9	6.1	5.2	5.9	5.0	7.2
6	4.9	4.2	4.0	3.9	3.4	2.8	2.4	4.3	7.9	9.1	10.1	11.3	11.0	11.1	p11.1c	11.1	9.4	9.1	8.2	4.3	3.5	p3.5a	3.5	3.5	p6.6
7	3.2	3.3	3.3	3.6	2.4	1.9	3.0	4.1	7.1	7.4	9.8	10.4	10.7	10.0	p10.1c	10.2	8.3	8.4	6.8	6.0	3.9	3.3	2.3	2.4	p5.9
8	2.8	2.9	3.1	2.9	3.2	2.8	2.8	4.3	6.9	8.2	8.5	8.6	9.6	8.7	9.5	9.3	9.6	8.1	7.1	4.7	3.6	3.1	2.9	2.9	5.7
9	3.0	2.9	3.3	3.1	3.1	3.0	2.9	4.6	6.9	8.4	8.9	9.4	9.2	10.1	9.7	9.0	9.6	8.6	6.0	5.1	4.6	3.2	2.6	3.0	5.8
10	3.2	3.0	3.2	3.4	3.4	3.3	2.9	4.6	6.7	8.1	8.9	9.3	8.4	8.1	9.6	9.0	9.1	7.9	5.9	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.9	8.8	10.0	9.1	8.6	8.9	10.3	9.0	7.8	6.2	4.9	4.1	3.8	3.7	3.7	...
12	3.9	4.2	4.1	4.2	4.6	4.2	4.0	5.1	7.2	8.4	8.7	8.0	9.1	7.6	9.7	9.2	8.6	7.9	6.6	5.8	4.7	3.5	3.3	3.5	6.1
13	3.6	3.5	3.7	3.8	3.8	3.5	3.4	4.3	6.8	8.9	9.6	8.7	8.7	8.8	9.1	8.5	8.0	7.7	6.4	5.0	4.1	3.8	3.2	3.2	5.8
14	3.5	3.8	3.8	3.9	3.9	3.5	3.5	5.0	7.2	7.7	9.0	8.8	8.5	8.5	9.0	8.8	8.0	8.7	9.2	6.1	4.2	3.2	3.7	4.2	6.1
15	4.3	3.5	3.5	3.7	3.5	3.2	2.9	5.3	8.1	8.4	9.6	8.9	9.4	10.1	8.4	8.4	8.4	8.0	6.6	4.3	2.9	3.1	3.0	3.3	5.9
16	3.9	4.2	4.0	3.7	3.3	3.2	3.2	5.2	8.7	8.2	9.1	9.4	9.6	9.3	9.5	9.3	9.5	8.7	7.0	4.1	4.0	4.0	3.5	4.0	6.2
17	3.5	3.5	3.8	4.1	4.1	3.1	2.8	5.3	7.9	9.1	9.1	9.8	10.3	11.7	10.4	10.1	10.4	9.4	7.6	5.0	4.3	3.2	4.0	3.1	6.5
18	3.0	3.2	3.6	3.7	3.2	2.5	2.7	4.7	7.2	8.9	8.2	9.4	9.4	10.1	9.7	8.8	9.7	8.1	6.5	4.7	4.3	3.7	3.1	3.3	5.9
19	p2.9	2.9	2.9	4.0	3.6	2.4	3.0	4.5	7.0	8.7	9.2	10.1	9.0	10.0	9.5	8.7	9.2	8.7	6.5	4.7	2.9	3.1	3.2	3.2	5.8
20	3.5	3.8	4.0	3.6	3.6	3.0	2.7	4.3	6.8	8.3	8.0	10.4	10.7	9.1	7.8	9.8	10.0	10.6	7.9	5.9	5.1	4.8	4.6	4.5	6.4
21	5.0	4.7	3.7	3.1	2.8	2.9	2.5	5.2	7.1	7.7	8.6	8.0	7.3	9.0	9.3	9.5	9.6	7.8	5.3	4.1	3.6	3.4	3.6	4.0	5.7
22	4.1	3.5	2.8	2.5	2.6	2.6	3.0	5.2	7.1	8.2	7.6	9.0	8.6	8.7	9.9	8.3	9.4	9.6	7.2	5.4	4.1	4.0	3.8	2.9	5.8
23	3.0	3.0	2.6	2.8	3.0	3.2	3.2	4.8	7.2	8.9	8.1	8.0	8.8	9.2	10.2	8.8	9.4	8.7	...c	...c	...c	3.1	2.6	3.0	...
24	3.2	4.0	3.8	4.0	3.7	3.0	2.2	4.1	6.9	7.6	8.5	9.0	8.0	9.1	8.7	8.4	8.4	8.1	6.5	4.3	3.6	3.7	3.7	3.5	5.7
25	3.4	3.7	3.3	3.2	3.1	2.9	2.8	4.7	7.8	...c	...c	...c	9.0	8.4	8.2	8.8	9.7	9.6	7.2	4.6	4.5	4.2	4.2	3.5	...
26	3.1	3.3	3.7	4.3	3.2	3.3	3.1	4.6	7.1	9.0	8.4	10.4	9.3	7.8	8.4	8.6	9.1	10.1	9.4	6.3	5.4	4.1	4.1	4.0	6.2
27	4.3	4.1	4.1	3.7	2.5	2.3	2.7	5.1	7.1	7.9	8.0	9.3	10.2	9.3	8.8	10.1	9.3	7.6	6.1	4.0	3.5	3.4	3.7	3.0	5.8
28	2.8	2.9	3.3	3.9	3.3	2.5	2.3	4.7	7.4	8.2	9.5	9.0	8.8	8.9	7.9	8.0	7.7	7.4	6.5	5.4	3.2	3.0	3.3	3.3	5.6
29	3.4	3.8	4.1	3.9	3.7	3.4	3.5	5.5	7.6	7.7	8.4	7.8	8.6	8.9	8.6	8.4	8.4	8.4	7.0	4.8	3.4	3.1	3.3	3.2	5.8
30	3.2	3.5	3.7	3.1	2.9	2.7	2.6	4.7	7.0	8.2	8.8	9.0	9.0	8.5	8.4	8.3	8.8	8.8	6.7	5.2	3.7	3.6	3.5	3.5	5.7
31	3.4	3.6	3.6	3.7	3.5	3.1	2.6	4.7	7.2	8.8	9.3	9.4	9.7	7.9	9.0	8.4	8.9	7.8	6.7	5.5	3.3	3.3	3.8	3.9	5.9
MEAN*	3.5	3.6	3.6	3.6	3.4	3.0	2.9	4.8	7.3	8.4	9.0	9.3	9.3	9.2	9.4	9.3	9.2	8.7	7.1	5.2	4.1	3.6	3.6	3.5	6.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 56

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JULY 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	280	290	270	270	280	270	260	240	250	240	260	290	280	280	260	230	260	210	260	270	260	280	270	263
2	260	260	280	270	260	250	260	250	230	230	260	280	275	250	290	250	250	225	220	250	230	250	240	260	253
3	250	260	250	235	250	230	220	260	230	240	260	270	320	280	260	280	230	240	250	240	220	260	290	300	255
4	310	260	230	250	...a	...a	350	260	250	250	240	250	210	260	220	240	250	230	220	210	270	280	270	290	...
5	290	300a	310	270	290	280	210	250	250	250	230	270	280	350	280	260	260	220	210	210	220	290	280	260	p263
6	250	300	280	250	240	230	290	260	250	250	250	280	270	300	225	280	230	230	220	220	310	...a	260	...a	...
7	...a	...a	290	280	270	290	310	230	230	230	270	260	250	270	...c	240	230	230	220	230	220	240	260	300	...
8	300	290	270	280	260	220	260	230	220	240	250	260	280	290	275	250	240	220	220	250	250	250	300	290	258
9	260	275	265	250	260	270	250	230	225	290	260	310	310	290	330	260	250	230	200	210	240	230	260	270	259
10	270	270	300	270	250	240	250	240	230	250	260	250	240	240	340	260	250	240	210	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	250	290	270	250	300	280	290	240	230	230	250	250	250	260	290	...
12	280	260	250	280	270	220	250	250	250	250	250	250	290	215	295	260	240	230	235	240	220	220	250	280	251
13	265	250	250	290	245	270	250	260	250	260	260	250	270	250	300	290	230	230	200	200	230	240	245	230	251
14	260	260	250	260	260	250	270	250	240	230	270	270	250	260	280	270	230	270	220	220	280	250	310	290	258
15	270	250	280	275	245	230	290	250	250	230	260	250	250	270	230	270	240	220	210	250	280	270	270	p290a	p255
16	310	p270a	240	240	250	250	250	250	245	240	p250	270	260	300	260	255	240	230	215	220	250	240	260	250	p252
17	230	240	265	265	240	260	250	240	240	260	260	300	260	300	260	265	240	230	210	210	225	240	240	250	249
18	235	250	250	250	220	200	240	250	230	260	260	260	250	250	280	230	240	220	220	220	230	220	260	250	241
19	220	260	260	210	200	260	240	230	240	240	270	270	240	280	260	270	240	220	210	220	250	270	280	260	246
20	280	290	280	230	260	220	300	250	250	240	230	260	270	250	290	250	280	230	210	250	270	280	275	300	260
21	280	240	230	260	250	280	270	250	230	250	260	250	220	260	310	250	250	230	230	230	280	330	250	270	261
22	280	230	260	250	305	280	260	240	230	240	245	290	260	300	270	250	280	230	220	240	250	270	250	260	258
23	260	260	260	270	270	260	230	250	230	240	240	230	250	260	290	230	240	210	...c	...c	...c	260	250	260	...
24	270	250	250	250	230	220	300	250	230	270	245	260	260	240	260	250	230	245	220	210	250	250	250	250	248
25	270	250	250	240	240	235	265	250	230	...c	...c	...c	280	260	280	260	260	230	210	230	240	260	240	245	...
26	250	260	250	220	230	250	240	250	240	250	290	265	250	270	300	280	270	250	220	200	220	230	300	300	254
27	240	240	270	260	200	265	250	250	230	230	250	300	270	260	280	260	230	220	220	220	250	290	230	270	249
28	280	280	250	p240a	p230a	220	290	220	230	230	250	260	270	260	250	250	230	220	225	220	260	260	250	260	247
29	270	260	240	220	240	250	230	230	225	250	250	250	270	280	280	270	250	230	220	210	230	270	250	270	248
30	260	250	210	220	260	240	250	240	240	250	260	270	270	280	260	225	220	230	220	220	220	270	250	250	244
31	260	250	250	250	220	220	225	230	240	250	270	250	230	250	310	275	250	230	220	220	230	300	280	250	248
MEAN*	266	p262	260	p254	249	247	261	245	237	247	p256	266	263	271	278	259	244	231	218	226	246	260	266	p269	253

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 57

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1939 JULY 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	4.8	4.6	4.7	4.9	4.4	...	...	...
2	...	...	...	...	4.4	4.8	4.9	4.5	5.0	...	...	...	...
3	...	...	...	...	4.8	4.8	5.5	4.9	4.8	4.6	...	...	...
4	...	...	...	...	...	4.6	...	4.5	...	...	...	...	...
5	...	...	...	...	...	4.8	5.0	5.5	4.6	4.4	...	...	...
6	...	...	...	...	...	4.7	4.8	5.3	...	4.3	...	...	...
7	...	...	...	...	4.8	4.8	4.8	4.8	...c	...	...	...	...
8	...	...	...	...	4.3	4.8	4.8	5.2	4.7	...	...	...	...
9	...	...	...	4.5	4.6	5.1	5.3	4.9	5.6	4.4	...	...	...
10	...	...	...	...	4.8	4.8	4.7	4.6	4.9	4.4	...	...	...
11	...	...	...	4.5	5.0	4.8	4.8	5.0	4.5	4.7	...	...	...
12	...	...	...	4.3	4.4	4.8	4.9	...	4.7	4.4	...	...	...
13	...	...	...	4.3	4.6	4.7	4.7	4.5	5.4	4.8	...	...	...
14	...	...	...	...	4.4	4.6	4.8	4.6	4.6	4.3	...	...	...
15	...	...	...	4.0	4.6	4.7	5.0	4.4	...	4.1	...	...	...
16	...	...	...	...	...	...	4.8	5.5	4.7	4.3	...	...	...
17	...	...	...	4.3	4.1	5.0	5.1	5.2	4.5	...	...	...	...
18	...	...	...	4.1	4.4	4.7	4.8	4.5	4.3	...	...	...	...
19	...	...	...	...	4.8	4.8	4.6	4.5	4.3	4.1	...	...	...
20	...	...	...	...	...	...	5.0	4.5	4.7	...	...	...	...
21	...	...	...	3.9	4.3	4.7	...	4.4	5.0	...	...	...	...
22	...	...	...	4.0	4.0	4.7	4.6	5.2	4.4	4.4	3.9	...	...
23	...	...	...	5.0	4.4	4.4	4.7	4.6	4.2	4.2	...	...	...
24	...	...	...	4.5	4.5	4.8	4.8	4.8	4.6	...	...	...	...
25	...	...	...	...	...	...	4.3	4.8	4.8	4.4	4.1	...	...
26	...	...	...	4.3	5.0	4.1	4.9	4.5	4.7	4.6	4.1	...	...
27	...	...	...	...	4.4	4.8	4.8	4.8	4.8	4.5	3.7	...	...
28	...	...	...	...	4.6	4.8	4.8	4.8	4.4	4.3	...	...	...
29	...	...	...	4.5	4.6	4.7	4.8	4.5	4.5	4.4	...	...	...
30	...	...	...	4.4	4.5	4.7	5.0	4.8	4.7	...	...	...	...
31	...	...	...	4.5	4.8	4.8	4.8	4.7	5.1	4.7	...	...	...
* MEAN	...	...	...	4.3	4.6	4.7	4.8	4.8	4.7	4.4	4.0	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	8	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	220	210	240	250	240	...	...	...
2	...	...	...	...	220	240	240	210	270	...	...	...	...
3	...	...	...	...	250	240	225	250	235	240	...	...	...
4	...	...	...	...	...	220	...	220	...	...	...	...	...
5	...	...	...	...	...	240	260	230	230	250	...	...	...
6	...	...	...	...	...	230	240	220	...	210	...	...	...
7	...	...	...	...	220	240	230	220	...c	...	...	...	...
8	...	...	...	...	230	235	240	260	260	...	...	...	...
9	...	...	...	220	245	250	220	220	225	240	...	...	...
10	...	...	...	...	240	240	230	230	200	230	...	...	...
11	...	...	...	225	230	240	240	220	225	260	...	...	...
12	...	...	...	250	240	230	210	...	200	230	...	...	...
13	...	...	...	250	240	225	210	230	230	230	...	...	...
14	...	...	...	...	220	220	220	200	200	240	...	...	...
15	...	...	...	220	210	220	260	250	...	205	...	...	...
16	...	...	...	...	...	...	230	225	225	245	...	...	...
17	...	...	...	240	250	230	220	220	240	...	...	...	...
18	...	...	...	230	210	210	230	210	220	...	...	...	...
19	...	...	...	...	230	240	230	200	250	230	...	...	...
20	...	...	...	...	...	230	220	210	260	...	...	...	...
21	...	...	...	220	220	220	...	220	210	...	...	...	...
22	...	...	...	220	210	200	220	220	210	230	240	...	...
23	...	...	...	220	210	220	200	200	180	210	...	...	...
24	...	...	...	240	230	230	220	230	210	...	...	...	...
25	...	...	...	...	...	...	190	230	210	230	245	...	...
26	...	...	...	240	210	220	230	220	200	240	240	...	...
27	...	...	...	...	220	220	250	250	250	225	230	...	...
28	...	...	...	...	230	220	220	210	210	220	...	...	...
29	...	...	...	230	210	210	215	200	220	220	...	...	...
30	...	...	...	230	230	230	215	220	230	...	...	...	...
31	...	...	...	250	210	230	220	200	190	225	...	...	...
* MEAN	...	...	...	232	226	228	226	222	224	231	239	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 58

JULY 1939 — JULY 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.7	0.6	...e	...e	0.8	2.6	2.8	3.3	3.2	3.4	3.3	p3.2a	3.1	2.6	2.0	p1.2a
2	...	0.6	0.7	0.8	0.9	0.8	1.0	0.8	0.8	0.7	0.7	0.6	...e	1.0	1.6	2.5	3.0	3.2	3.4	3.4	3.4	3.3	3.1	2.7	2.1	1.1
3	...	...e	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.7	0.6	0.7	1.8	2.7	3.2	3.4	3.4	3.5	3.5	3.3	3.3	2.7	1.7	1.0
4	...	...e	1.0	1.0	0.9	0.9	1.8	0.9	0.8	0.8	0.7	...e	...e	...a	1.8	2.4	2.9	3.2	3.4	3.3	3.4	3.3	3.2	2.7	1.9	1.1
5	...	...e	1.1	0.8	0.9	0.9	0.8	1.1	1.0	1.0	0.8	...e	...e	1.0	1.7	2.5	3.0	3.2	3.4	3.4	3.3	3.3	3.1	2.6	1.6	1.0
6	...	0.7	0.8	0.8	0.9	1.0	1.0	1.0	0.8	0.7	0.6	...e	...e	0.8	1.6	2.6	2.8	3.2	3.3	3.3	3.3	3.3	3.0	2.7	2.0	1.4
7	...	0.5	0.6	0.7	0.8	0.7	0.8	1.0	...c	0.8	0.8	0.7	0.7	0.8	1.5	2.4	2.9	3.3	3.4	3.5	3.3	p3.0c	2.7	2.4	1.6	1.4
8	...	...e	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	...e	0.8	1.3	2.4	3.2	3.5	3.6	3.6	3.7	3.4	3.3	2.7	2.1	1.5
9	...	...e	...e	...e	0.7	0.6	0.8	0.8	0.8	0.7	0.8	0.6	...e	0.8	1.3	2.6	2.8	3.2	3.4	3.5	3.4	3.3	3.1	2.8	2.0	0.8
10	...	...e	0.7	0.6	0.7	0.9	0.7	0.6	0.6	0.8	0.6	0.6	0.5	1.0	1.7	2.6	2.9	3.4	3.5	3.5	3.5	3.4	3.1	2.8	2.1	1.1
11	...	...c	...c	0.7	0.8	0.8	0.8	0.8	0.8	0.6	0.7	0.7	0.6	...c	...c	...c	3.0	3.3	3.4	3.5	3.5	3.4	3.2	2.7	1.9	1.5
12	...	...e	1.0	0.8	0.7	0.9	0.8	0.8	1.0	0.8	0.7	0.7	0.5	0.8	1.8	2.4	3.1	3.3	3.3	3.6	3.6	3.4	3.2	2.7	2.4	1.5
13	...	...e	0.7	0.8	0.8	0.9	1.0	0.8	0.7	0.8	0.7	0.6	0.5	0.8	1.7	2.7	3.0	3.3	3.4	3.5	3.4	3.5	3.1	2.8	2.1	1.2
14	...	...e	0.7	0.9	0.9	1.0	0.9	0.7	0.8	0.7	0.7	0.6	...e	0.7	1.7	2.5	3.1	3.3	3.5	3.6	3.5	3.4	3.2	2.7	2.0	1.0
15	...	...e	0.7	0.8	0.8	0.9	0.8	0.9	0.7	0.7	0.7	...e	...e	...e	1.6	2.4	2.9	3.2	3.3	3.4	3.5	3.4	3.1	2.8	2.1	1.6
16	...	...e	0.8	...d	...d	...d	...d	...d	...d	0.8	1.0	0.8	...e	0.8	1.0	2.4	2.9	p3.2d	3.5	3.7	3.6	3.4	3.2	2.7	2.0	1.5
17	...	...d	...d	...d	0.9	1.0	1.0	1.0	0.9	...d	...d	0.7	...e	0.8	1.7	2.5	3.1	3.0	3.3	3.3	3.4	3.5	3.3	3.0	2.1	1.2
18	...	0.5	0.9	0.7	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.8	...e	0.8	1.5	2.5	2.8	3.1	3.3	3.4	3.2	3.4	2.9	2.7	1.6	1.5
19	...	0.6	0.7	0.7	0.9	0.8	0.9	0.8	0.8	0.6	0.6	0.7	...e	1.0	1.5	2.4	2.9	3.0	3.3	3.5	3.4	3.3	3.0	2.7	2.1	1.0
20	...	...e	0.8	0.7	0.8	1.0	1.0	1.0	0.7	0.6	...e	0.7	...e	p1.0a	1.6	2.5	3.0	3.3	3.3	3.6	3.4	3.5	3.3	2.5	2.1	0.8
21	...	...e	0.8	0.7	0.7	0.6	0.8	0.9	0.9	0.7	0.9	0.7	...e	...e	1.1	2.2	2.9	3.1	3.3	3.3	3.4	3.4	3.0	2.7	2.0	p1.2a
22	...	...e	0.8	0.7	0.8	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	2.0	2.9	3.0	3.3	3.5	3.6	3.4	3.2	2.8	1.9	0.8
23	...	...e	0.6	1.2	1.0	...d	...d	...d	...d	...d	...d	...d	...c	0.8	1.8	2.5	3.0	3.5	3.3	3.5	3.4	3.3	3.2	2.9	2.1	...c
24	...	...e	0.6	0.7	0.7	0.9	0.9	0.8	0.8	0.7	0.7	0.6	...e	1.2	1.9	2.7	3.3	3.1	3.4	3.4	3.4	3.5	3.2	2.7	2.1	1.2
25	...	...e	0.8	...c	...c	...c	1.0	1.1	0.9	0.9	0.8	0.7	...e	0.8	1.8	2.6	...c	...c	...c	3.4	3.4	3.3	3.2	2.9	1.9	0.9
26	...	...e	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.7	0.7	0.7	...e	0.8	1.8	2.7	3.1	3.2	3.3	3.4	3.4	3.3	3.2	2.7	2.0	1.0
27	...	...e	0.8	1.0	0.6	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...e	0.8	1.7	2.5	3.0	3.4	3.5	3.4	3.3	3.3	3.0	2.8	2.2	1.2
28	...	...e	0.7	0.7	0.8	0.8	0.7	0.7	0.8	0.7	0.6	0.6	...e	1.2	1.8	2.5	2.8	3.1	3.3	3.4	3.4	3.3	3.1	2.8	1.9	1.0
29	...	...e	0.8	0.8	0.8	0.7	1.0	1.0	0.9	0.8	0.8	0.9	...e	0.6	1.9	2.7	3.1	3.3	3.3	3.5	3.4	3.4	3.2	2.7	2.1	1.3
30	...	...e	0.6	0.8	0.8	0.7	0.8	0.6	0.7	0.6	...e	0.7	...e	1.0	1.9	2.9	3.2	3.2	3.3	3.5	3.4	3.4	3.3	2.8	2.1	1.1
31	...	0.6	1.0	0.7	0.8	1.0	0.9	1.0	0.7	0.8	0.8	0.6	...e	0.6	1.9	2.6	3.1	3.3	3.6	3.4	3.6	3.4	3.3	2.8	2.1	1.5
MEAN*	...	0.5	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.5	0.8	1.6	2.5	3.0	3.2	3.4	3.5	3.4	3.4	3.1	2.7	2.0	1.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 59

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1939 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND AUGUST 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.8	3.5	3.5	3.5	3.7	3.6	3.2	4.9	7.5	8.4	9.4	9.2	8.8	8.5	7.5	8.6	8.3	7.6	6.9	4.9	4.7	3.6	3.2	3.3	5.8
2	3.5	3.6	3.7	3.9	3.4	3.0	3.0	5.1	7.2	p8.0c	8.5	8.8	8.5	p8.5c	8.6	8.5	8.0	7.5	7.1	5.0	3.5	3.3	3.3	p3.3c	5.7
3	...c	...c	3.8	5.2	...c	...c	...c	...c	...c	8.0	8.5	7.5	8.9	8.5	8.3	8.1	7.8	7.3	6.6	4.5	4.0	3.6	3.4	3.3	...
4	3.6	3.8	4.0	4.3	4.2	3.8	3.4	5.0	7.6	8.8	8.8	9.5	8.4	7.9	7.5	8.4	7.9	7.8	7.2	4.7	4.4	4.2	4.4	4.3	6.0
5	4.2	3.4	3.4	3.8	3.3	3.3	3.2	5.4	7.1	8.0	9.0	8.4	8.9	8.2	8.7	8.1	8.0	8.4	7.2	5.0	5.0	3.5	3.1	3.2	5.8
6	3.4	3.4	3.6	3.9	3.9	3.6	3.2	5.3	7.1	8.4	8.1	8.4	8.4	8.4	7.3	8.3	7.6	7.7	6.9	5.0	4.3	3.9	3.3	3.6	5.7
7	3.3	3.5	3.4	3.5	3.4	2.9	2.7	5.3	7.3	7.7	7.9	9.1	8.8	8.6	p8.3c	p8.0c	7.7	7.7	7.5	5.0	4.6	3.8	3.5	3.6	5.7
8	3.5	3.6	3.8	3.9	3.9	3.8	3.6	6.0	7.6	7.9	8.1	8.3	9.0	7.8	7.7	8.2	7.6	8.4	6.8	5.3	5.1	4.1	3.5	3.1	5.9
9	3.5	3.5	3.6	3.6	3.3	3.3	3.3	5.3	7.2	8.3	8.5	9.4	8.4	7.9	7.6	7.9	8.0	8.5	7.9	6.0	5.0	4.6	4.1	3.6	5.9
10	3.5	3.5	3.6	4.4	4.5	4.6	3.9	5.8	7.7	8.0	9.2	9.2	7.6	8.6	8.3	8.6	8.3	8.4	8.2	5.5	5.4	4.5	5.3	4.1	6.3
11	3.5	3.9	3.8	3.5	3.3	3.5	3.6	5.7	7.6	8.7	8.5	9.9	9.9	9.7	9.2	8.8	8.0	8.0	7.0	5.8	4.8	4.7	4.1	4.7	6.3
12	4.2	4.5	4.5	4.7	4.9	4.9	4.7	5.9	7.9	9.2	9.7	9.8	9.7	10.6	11.7	12.8	11.2	8.3	9.4	8.1	7.5	8.2	6.9	4.3	7.6
13	4.1	3.8	4.1	4.0	3.9	4.1	3.1	5.0	6.4	7.2	7.7	8.4	8.8	8.4	9.5	10.0	9.6	8.3	7.8	6.3	5.8	4.2	4.0	3.2	6.2
14	2.5	2.4	2.1	4.2	3.9	3.1	3.0	5.5	7.9	8.5	9.3	9.8	8.8	8.2	9.0	9.0	8.2	8.3	7.7	5.2	4.7	4.6	3.5	3.5	6.0
15	3.4	3.5	3.1	3.0	2.7	2.4	2.4	6.4	8.4	9.3	10.4	9.7	9.2	9.5	9.2	10.0	9.0	7.8	7.2	5.9	5.2	5.3	4.6	4.3	6.3
16	4.0	3.9	4.0	3.9	3.4	3.3	2.9	5.8	7.6	8.4	8.6	9.1	8.9	8.5	9.4	9.9	9.4	9.4	8.9	6.1	4.6	4.8	4.9	4.3	6.4
17	4.2	4.4	4.3	4.5	p3.5a	2.4	2.9	5.7	8.5	9.6	9.2	11.1	10.5	10.6	10.5	9.2	9.0	8.6	8.3	7.3	6.6	5.5	4.8	4.0	6.9
18	3.5	3.4	3.4	3.3	3.3	3.0	2.9	6.0	7.3	8.4	9.6	p9.8c	10.1	8.8	9.2	10.3	9.3	9.2	7.8	5.5	5.1	4.4	3.4	3.2	6.3
19	3.1	2.9	3.0	3.5	3.8	3.9	3.0	5.8	7.2	8.9	10.1	9.5	9.3	8.7	9.0	9.3	9.4	9.0	9.0	6.2	5.5	4.6	3.8	3.8	6.4
20	3.6	3.7	3.8	4.0	2.9	2.6	2.6	5.8	9.0	9.3	10.5	10.2	9.3	10.2	9.9	9.8	9.1	8.6	7.2	6.1	5.7	5.0	4.4	4.1	6.6
21	4.1	3.9	4.1	4.0	3.8	3.5	3.2	5.8	7.8	p8.5c	9.2	10.0	9.7	9.3	9.5	9.5	9.8	8.5	7.6	6.9	6.3	5.2	4.4	4.5	6.6
22	4.1	3.9	4.2	4.3	4.0	4.3	4.1	6.6	8.1	9.3	9.5	9.7	11.0	12.5	13.4	12.2	9.8	7.9	8.0	7.4	7.2	7.0	6.4	4.7	7.5
23	4.8	4.7	4.1	3.7	3.3	3.1	2.9	4.9	5.8	5.7	5.3	5.5	5.4	5.5	5.8	5.8	6.3	5.5	5.0	4.4	4.1	4.1	4.4	4.0	4.8
24	3.6	3.7	3.4	2.4	3.2	2.0	2.7	5.9	7.0	6.9	7.6	8.7	8.6	9.8	8.5	8.2	8.0	8.5	8.2	6.6	6.4	4.9	3.3	2.9	5.9
25	3.0	3.0	2.7	2.9	2.0	2.0	2.1	5.8	7.8	8.7	8.8	10.6	9.6	9.1	9.3	9.1	8.8	8.5	8.2	7.0	5.5	4.7	4.3	4.0	6.2
26	3.9	3.9	4.0	3.9	2.9	2.6	2.7	6.7	7.3	8.9	9.5	10.7	9.6	9.2	10.3	9.8	8.8	8.3	8.0	7.3	5.9	4.3	4.2	4.1	6.5
27	3.9	3.8	3.8	3.6	3.3	3.2	3.3	6.8	8.1	8.6	9.6	11.1	10.3	10.7	11.1	10.1	9.5	8.7	8.1	7.3	6.7	6.0	4.5	3.9	6.9
28	3.8	3.9	3.8	4.1	3.5	3.1	3.5	7.1	8.4	8.9	11.2	11.3	11.7	11.0	11.0	10.7	10.3	9.0	8.2	6.6	6.5	5.8	5.3	4.8	7.2
29	4.4	4.0	4.0	3.9	3.8	3.5	3.7	7.0	8.2	9.3	11.0	11.3	10.0	10.9	10.7	10.3	9.8	8.8	8.1	7.5	6.8	6.2	5.4	4.9	7.2
30	4.7	4.7	4.1	3.7	3.6	3.6	4.0	7.3	9.4	9.8	10.1	10.1	10.7	11.3	10.8	10.8	10.0	9.7	9.2	8.2	7.2	6.7	6.0	5.7	7.6
31	5.5	5.1	5.2	5.1	3.8	3.7	3.9	7.3	9.0	10.0	11.0	11.3	10.7	10.8	10.4	9.8	9.3	9.2	8.6	7.1	6.3	6.3	5.2	4.5	7.5
* MEAN	3.8	3.8	3.7	3.9	3.6	3.3	3.2	5.9	7.7	8.5	9.1	9.5	9.3	9.2	9.3	9.3	8.8	8.3	7.7	6.1	5.5	4.9	4.4	4.0	6.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 60

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — AUGUST 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	235	240	230	230	260	230	230	240	230	260	260	270	260	270	260	280	240	230	220	220	230	220	260	260	244
2	260	250	260	240	220	250	260	250	230	p240c	250	270	275	p290c	310	260	230	230	230	220	230	260	260	p260c	251
3	...c	...c	240	220	...c	...c	...c	...c	...c	230	270	270	280	270	260	260	230	230	220	220	250	230	260	250	...
4	270	270	270	250	220	240	230	230	240	250	260	250	260	290	260	280	260	230	210	190	260	260	290	270	252
5	230	250	250	230	260	270	270	240	230	240	250	270	300	270	290	260	260	240	230	230	230	230	260	270	252
6	260	240	250	250	250	230	250	250	240	260	250	290	270	270	280	250	230	230	220	200	210	220	250	270	247
7	270	250	250	250	230	230	250	240	250	240	280	290	270	280	p280c	p270c	260	230	220	230	230	210	260	280	252
8	280	260	270	250	260	240	250	260	230	230	220	300	260	290	270	250	240	230	210	210	250	220	230	290	250
9	270	280	270	240	230	240	240	240	240	250	260	270	300	260	250	240	250	230	230	210	230	230	220	250	247
10	260	250	260	240	260	260	250	250	230	240	280	260	250	290	300	260	230	230	230	240	230	270	250	200	251
11	250	300	300	310	300	280	230	230	240	260	270	270	280	290	270	270	250	250	210	215	220	220	250	270	260
12	270	290	290	280	p270a	260	220	230	250	250	280	290	340	360	320	270	270	260	270	250	p250a	250	250	220	270
13	250	300	300	250	260	250	240	270	250	260	300	290	280	260	290	280	240	230	230	230	230	220	250	250	259
14	300	280	260	240	250	250	240	250	230	250	270	260	260	260	300	280	230	250	210	220	240	240	270	260	254
15	260	250	220	240	250	250	270	240	230	250	260	250	260	270	275	300	225	230	210	220	250	250	225	245	247
16	250	260	250	245	230	250	260	230	240	285	270	280	350	270	310	280	250	240	210	220	280	260	280	350	265
17	350	...a	...a	250	...a	...a	310	260	240	280	285	270	290	290	250	230	260	245	240	230	250	210	230	245	...
18	270	280	260	250	250	270	260	240	235	230	240	p260c	280	320	250	240	225	230	220	260	250	230	260	265	253
19	260	270	260	p270a	290	260	220	240	230	250	250	280	260	270	280	270	260	250	230	210	230	220	p250a	280	254
20	330	310	280	250	250	p270a	300	250	250	230	260	280	270	280	270	280	240	230	220	240	280	260	270	270	265
21	270	270	270	250	250	230	250	230	250	p260c	280	280	270	270	280	270	265	230	220	220	240	230	250	270	254
22	240	260	270	260	300	270	230	230	240	275	290	330	300	330	265	250	230	230	270	280	305	270	230	280	268
23	340	310	310	340	320	310	300	260	250	310	470	430	510	500	450	420	300	280	265	260	295	280	260	280	335
24	250	270	290	270	p280a	300	280	240	230	235	290	290	310	270	260	280	275	250	220	230	230	220	250	270	262
25	270	260	260	280	200	260	250	240	250	250	265	260	260	280	270	270	230	250	230	230	230	240	300	310	256
26	280	270	250	230	230	200	275	220	230	280	250	270	260	260	275	250	260	240	230	230	220	230	250	260	248
27	270	270	245	220	260	250	250	240	230	255	280	265	275	290	270	250	260	230	225	220	230	225	230	245	249
28	250	275	300	260	220	230	280	250	220	250	280	270	290	260	290	290	230	230	230	220	240	230	260	220	253
29	240	250	260	250	250	260	280	230	230	290	275	260	270	280	280	275	250	235	230	230	240	230	230	250	253
30	250	240	240	230	250	280	275	240	250	270	270	270	265	295	275	270	260	245	225	220	235	250	300	280	258
31	260	250	250	230	200	265	270	240	230	260	260	270	250	290	270	260	260	250	220	220	240	240	235	250	249
*MEAN	268	267	264	252	252	255	257	242	238	255	273	280	286	290	283	271	248	239	227	227	243	237	254	264	257

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 61

AUGUST 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.8	4.8	5.0	4.8	4.6	...	...	...	...
2	...	...	...	...	4.6	5.0	4.9	...c	5.2	4.4	...	...	...
3	...	...	...	5.0	4.7	4.9	4.8	4.8	5.0	...	...	...	...
4	...	...	...	4.4	4.8	4.8	4.7	5.0	4.8	4.6	4.0	...	...
5	...	...	...	...	4.8	4.9	5.0	4.9	4.7	4.2	...	...	...
6	...	...	...	4.4	4.6	4.9	4.8	4.8	4.8	4.5	...	...	...
7	...	...	...	...	5.0	5.0	5.0	5.0	...c	...c	4.9	...	...
8	...	...	...	...	...	4.9	4.8	4.8	4.5	4.3	3.7	...	...
9	...	...	...	...	4.9	4.9	5.1	4.9	4.7	...	...	...	...
10	...	...	...	...	4.9	4.9	5.0	4.9	5.2	...	...	...	...
11	...	...	...	4.3	4.6	5.0	4.4	4.9	4.4	4.3	3.5	...	...
12	...	...	...	4.3	4.8	5.0	5.3	5.5	5.3	4.7	4.3	...	...
13	...	...	...	3.8	4.8	5.0	4.8	4.8	4.8	4.8	...	...	...
14	...	...	...	4.4	4.7	4.9	4.8	4.7	4.6	4.6	...	...	...
15	...	...	...	5.1	5.2	5.0	5.0	5.0	5.1	4.8	...	...	...
16	...	...	...	5.0	4.8	5.3	4.7	5.0	5.0	4.8	4.2	...	...
17	...	...	...	4.8	5.5	5.0	5.2	4.7	4.1	...	4.0	...	...
18	...	...	...	...	4.7	...c	5.2	5.9	...	...	...	...	...
19	...	...	...	4.6	4.9	5.2	5.0	5.0	5.0	4.7	...	...	...
20	...	...	...	...	4.9	5.1	4.7	4.5	5.1	4.3	4.0	...	...
21	...	...	...	...	5.2	5.3	5.1	5.0	5.1	4.3	4.0	...	...
22	...	...	...	5.0	5.0	5.5	4.9	5.4	5.0	4.4	...	...	...
23	...	...	...	4.4	4.4	4.5	4.3	4.4	4.4	4.3	4.0	...	...
24	...	...	...	4.2	5.1	5.0	5.5	5.0	4.6	4.8	4.1	...	...
25	...	...	4.4	4.7	4.7	5.1	4.9	5.0	5.3	4.5	...	...	...
26	...	...	...	4.8	5.0	5.1	5.0	5.0	4.8	4.5	4.0	...	...
27	...	...	...	4.5	5.5	4.8	5.1	5.3	5.1	4.5	4.5	...	...
28	...	...	...	4.4	5.0	5.2	5.0	5.0	5.1	5.0	...	...	...
29	...	...	...	5.3	5.3	5.3	5.2	5.3	5.1	4.3	4.0	...	...
30	...	...	4.3	4.9	5.1	5.2	5.2	5.3	5.1	4.7	4.0	...	...
31	...	...	...	4.5	4.5	5.0	4.6	5.0	4.8	4.4	4.2	...	...
* MEAN	...	...	4.4	4.6	4.9	5.0	4.9	5.0	4.9	4.5	4.1	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	240	230	220	210	210	...	...	...	...
2	...	...	...	...	220	210	210	...c	200	230	...	...	...
3	...	...	...	200	230	220	230	210	220	...	...	...	...
4	...	...	...	240	220	210	210	200	200	210	230	...	...
5	...	...	...	...	230	220	215	215	230	210	...	...	...
6	...	...	...	230	220	220	210	220	210	220	...	...	...
7	...	...	...	...	220	220	220	210	...c	...c	220	...	...
8	...	...	...	...	...	210	210	210	220	220	220	...	...
9	...	...	...	...	220	230	220	220	190	...	...	...	...
10	...	...	...	...	230	250	210	220	220	...	...	...	...
11	...	...	...	250	230	240	220	220	230	240	230	...	...
12	...	...	...	240	230	230	210	220	240	230	250	...	...
13	...	...	...	230	240	220	240	230	260	230	...	...	...
14	...	...	...	220	230	220	200	200	220	230	...	...	...
15	...	...	...	215	225	220	200	200	235	190	...	...	...
16	...	...	...	230	230	230	210	250	200	230	230	...	...
17	...	...	...	240	230	220	225	220	220	...	240	...	...
18	...	...	...	...	220	...c	230	250	...	...	...	...	...
19	...	...	...	240	230	220	230	250	210	220	...	...	...
20	...	...	...	...	260	220	230	220	230	210	230	...	...
21	...	...	...	...	230	215	220	220	200	200	200	...	...
22	...	...	...	210	250	230	210	205	215	215	...	...	...
23	...	...	...	250	230	210	230	250	230	250	250	...	...
24	...	...	...	220	200	200	200	210	225	210	230	...	...
25	...	...	230	215	210	210	210	200	225	250	...	...	...
26	...	...	...	200	230	220	220	215	190	220	220	...	...
27	...	...	...	220	200	230	210	210	210	200	230	...	...
28	...	...	...	220	210	230	200	220	210	210	...	...	...
29	...	...	...	220	230	230	220	210	210	210	235	...	...
30	...	...	230	230	220	210	210	190	225	230	230	...	...
31	...	...	...	220	230	220	190	210	200	210	220	...	...
* MEAN	...	...	230	226	226	222	215	217	217	220	229	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 62

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1939 AUGUST 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.5	0.8	0.8	0.9	0.9	1.0	0.9	1.0	0.8	0.7	0.7	p0.5e
2	...	0.5	0.6	...c	1.2	0.9	0.8	...c	0.8	0.8	0.6	p0.5e	p0.5e
3	...	...c	...c	0.8	0.8	1.0	0.8	0.8	0.9	0.8	0.7	0.7	p0.5e
4	...	0.9	1.1	1.1	0.9	0.8	0.9	0.8	0.7	0.6	0.9	0.6	0.6
5	...	0.5	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.0	0.8	0.8	p0.5e
6	...	p0.5e	0.7	0.7	0.7	0.9	0.8	0.9	0.8	0.6	0.6	0.6	0.6
7	...	0.9	0.7	0.8	0.8	0.9	0.8	0.8	...c	...c	0.7	0.7	p0.5e
8	...	p0.5e	0.6	0.7	0.8	0.9	0.9	0.8	0.7	0.7	0.7	0.6	p0.5e
9	...	p0.5e	0.7	0.7	0.8	0.9	0.8	1.0	0.9	0.8	0.7	p0.5e	p0.5e
10	...	p0.6e	0.9	0.9	1.0	1.0	1.3	1.0	1.0	1.1	1.0	0.7	p0.5e
11	...	p0.7e	0.8	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.6
12	...	p0.5e	0.6	0.8	0.8	0.9	1.0	0.9	1.0	0.9	0.8	0.8	p0.5e
13	...	p0.5e	0.6	0.9	0.8	0.9	1.0	1.0	0.8	0.8	0.9	0.8	p0.5e
14	...	p0.5e	0.7	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.6	p0.5e
15	...	p0.5e	0.6	0.7	0.7	0.8	0.8	0.9	0.7	0.8	0.8	0.7	p0.5e
16	...	0.6	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	p0.5e	p0.5e
17	...	0.8	0.7	1.1	0.8	1.0	1.1	1.1	0.9	0.8	0.6	0.7	0.6
18	...	0.6	0.6	0.8	0.7	...c	0.8	0.8	0.9	0.8	0.7	0.7	p0.5e
19	...	0.6	0.7	1.0	0.9	0.8	0.9	0.9	0.7	0.8	0.8	0.7	p0.5e
20	...	0.6	0.9	1.2	0.8	1.0	1.0	0.9	0.8	0.9	0.7	0.7	0.6
21	...	p0.5e	0.8	...c	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.6
22	...	0.7	0.7	0.6	1.1	0.8	0.8	1.1	1.2	0.8	0.7	0.7	0.6
23	...	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.7	0.8	0.8	0.8	0.7
24	...	0.8	0.8	0.8	0.9	0.8	0.8	0.8	1.0	1.0	0.9	0.8	0.8
25	...	0.8	1.0	0.7	0.8	1.0	0.8	0.8	0.8	0.7	0.7	0.7	p0.5e
26	...	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.6	p0.5e	0.6
27	...	0.7	0.8	1.0	1.0	0.9	0.9	0.8	0.7	0.7	0.6	p0.5e	p0.5e
28	...	0.6	0.7	0.8	0.8	1.0	0.9	0.8	0.8	0.7	0.6	0.6	0.6
29	...	0.6	0.6	0.7	0.7	1.2	1.1	2.3	0.8	0.8	0.8	1.2	0.7
30	...	0.7	0.7	1.0	1.2	1.1	1.0	1.0	2.1	1.0	1.0	0.8	p0.5e
31	...	0.7	1.1	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.0	0.8	p0.5e
MEAN*	...	0.6	0.8	0.9	0.9	0.9	0.9	1.0	0.9	0.8	0.8	0.7	0.6

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.8	2.0	2.5	3.0	3.6	3.5	3.7	3.6	3.5	3.4	2.9	2.1	1.2
2	0.8	1.8	2.6	p3.0c	3.5	3.5	3.5	p3.5c	3.4	3.3	2.9	2.1	1.0
3	...c	...c	...c	2.9	3.5	3.5	3.5	3.5	3.5	3.4	2.8	2.0	1.2
4	0.8	1.8	2.6	3.0	3.3	3.4	3.5	3.6	3.5	3.3	2.9	2.1	1.0
5	0.8	1.9	2.5	2.7	3.5	3.6	3.6	3.6	3.4	3.0	2.9	2.1	1.2
6	0.8	1.9	2.6	3.1	3.3	3.5	3.6	3.5	3.5	3.3	2.9	2.2	1.0
7	0.9	1.9	2.7	3.2	3.6	3.5	3.6	3.5	p3.4c	p3.0c	2.8	2.1	...a
8	0.8	1.9	2.7	3.1	3.4	3.6	3.6	3.6	3.5	3.1	2.9	2.2	1.0
9	0.7	2.0	2.8	3.2	3.4	3.5	3.6	3.6	3.5	3.3	3.1	2.2	1.1
10	0.6	2.0	2.8	3.1	3.4	3.6	3.7	3.6	3.5	3.3	3.0	2.2	1.2
11	0.8	2.1	2.8	3.2	3.6	3.6	3.6	3.6	3.4	3.4	3.0	2.3	1.2
12	0.9	2.0	2.7	3.2	3.4	3.6	3.7	3.6	3.6	3.4	...a	...a	...a
13	0.8	2.0	2.5	3.1	3.3	3.5	3.6	3.5	3.5	3.3	2.9	2.2	1.0
14	0.8	2.0	2.7	3.3	3.6	3.6	3.7	3.6	3.5	3.3	2.9	2.4	1.2
15	0.8	2.0	2.8	3.1	3.4	3.6	3.6	3.6	3.3	3.3	3.0	2.2	1.3
16	0.9	2.1	2.6	3.0	3.3	3.5	3.8	3.4	3.6	3.4	3.0	2.4	1.2
17	0.7	2.0	2.7	3.1	3.3	3.5	3.6	3.3	3.3	3.5	3.0	2.2	1.2
18	...a	2.0	2.6	3.4	3.5	p3.7c	3.8	3.6	3.6	3.4	2.8	...a	1.5
19	0.6	2.2	2.9	3.3	3.7	3.8	3.6	3.7	3.5	3.3	3.0	2.4	1.5
20	...a	2.1	2.9	3.3	3.7	3.6	3.8	3.8	3.3	3.4	2.9	2.3	1.2
21	1.0	2.2	2.9	p3.2c	3.4	3.5	3.7	3.6	3.4	3.0	2.9	2.2	1.2
22	0.8	2.2	2.6	3.0	3.4	3.4	3.5	3.5	3.4	3.2	2.9	2.2	...a
23	1.2	2.2	2.7	2.8	3.1	3.3	3.3	3.5	3.4	3.1	2.8	2.2	1.6
24	1.0	2.2	2.6	3.0	3.3	3.5	3.5	3.4	3.5	3.3	3.0	2.3	1.2
25	0.8	2.2	2.8	3.1	3.4	3.5	3.5	3.5	3.5	3.3	2.9	2.8	...a
26	1.0	2.2	2.7	3.1	3.3	3.4	3.3	3.3	3.4	3.3	2.9	2.5	1.4
27	0.8	2.1	2.8	3.3	3.3	3.6	3.7	3.6	3.5	3.2	3.0	2.3	1.2
28	0.8	2.2	2.8	3.2	3.5	3.6	3.7	3.5	3.5	3.4	3.1	2.4	1.4
29	p1.0a	2.2	2.7	3.2	3.5	3.7	3.7	3.7	3.6	3.5	3.0	2.5	1.4
30	1.0	2.2	2.8	3.2	3.6	3.5	3.7	3.8	3.9	3.5	3.0	2.5	1.4
31	1.0	2.2	3.0	3.3	3.5	3.6	3.7	3.9	3.5	3.3	3.0	2.5	1.3
MEAN*	0.8	2.1	2.7	3.1	3.4	3.5	3.6	3.6	3.5	3.3	2.9	2.3	1.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 63

SEPTEMBER 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1939

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.3	4.3	4.5	4.4	4.1	3.9	3.6	6.5	3.4	8.9	10.3	11.0	10.9	10.9	11.0	9.6	9.5	9.3	8.7	7.3	6.6	5.9	6.7	5.4	7.3
2	5.2	4.9	4.9	4.9	4.8	4.2	4.3	7.0	9.0	9.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
3	5.7	5.4	5.1	4.8	4.5	4.6	4.6	7.0	9.1	10.7	11.1	11.7	11.3	12.0	13.0	12.5	10.3	9.3	8.0	7.2	7.2	7.0	6.4	5.5	8.1
4	5.5	5.3	4.9	4.8	4.8	4.5	4.3	5.8	6.0	6.5	7.9	8.9	9.4	10.7	p10.0	9.2	8.7	8.4	8.2	6.7	5.9	6.0	5.7	5.3	6.8
5	4.7	4.6	4.7	4.9	4.4	4.1	4.2	6.7	8.3	9.4	9.3	11.0	11.4	10.5	10.3	10.0	10.2	9.9	9.5	7.8	7.1	6.6	6.1	5.4	7.6
6	5.1	5.0	4.8	4.6	4.3	4.6	5.0	7.9	9.3	9.6	9.9	10.9	p11.0b	11.0	10.4	10.5	9.9	10.1	10.3	8.9	7.1	6.4	5.9	5.9	7.8
7	5.5	5.5	5.4	4.7	4.9	4.9	4.9	7.8	9.2	p10.6	11.3	11.5	10.6	11.0	10.6	10.7	10.7	9.9	9.4	9.0	8.0	7.2	7.2	6.9	8.2
8	6.5	6.0	5.0	5.0	4.9	5.5	6.0	8.4	9.3	10.7	11.6	12.2	12.0	11.5	11.2	11.5	11.1	11.0	10.4	9.2	8.4	8.2	7.0	6.5	8.7
9	6.1	5.9	5.8	5.0	4.6	4.6	4.9	7.9	9.8	10.7	11.4	11.5	11.6	12.0	11.3	11.0	11.8	12.1	11.3	10.5	8.5	7.7	7.6	7.1	8.8
10	6.6	6.3	5.9	5.2	5.5	5.1	6.2	9.0	11.4	12.0	11.6	10.8	10.6	11.0	10.8	10.3	10.0	10.2	10.4	10.0	7.8	7.0	6.3	5.5	8.6
11	5.3	5.4	5.5	5.0	4.2	4.1	4.9	6.0	9.8	11.0	10.8	11.3	11.8	11.8	11.1	11.1	11.2	11.0	10.4	9.2	7.6	6.9	6.3	6.4	8.2
12	6.2	5.4	5.0	4.3	4.0	4.2	5.0	8.4	9.4	10.8	11.2	11.5	11.3	11.3	11.8	11.4	10.5	10.5	10.5	9.3	8.2	7.9	7.3	6.3	8.4
13	5.9	5.0	5.3	5.0	4.7	4.6	5.1	8.2	10.4	10.9	11.7	12.5	12.0	12.0	11.6	11.3	11.0	10.9	10.6	9.0	7.6	6.8	6.1	6.1	8.5
14	5.6	5.5	5.3	4.4	3.9	4.0	4.9	7.7	8.9	9.7	11.5	11.2	11.5	11.5	12.1	11.6	10.8	10.2	9.9	8.5	7.2	6.9	6.3	6.1	8.1
15	6.1	5.9	5.8	4.9	4.4	4.3	5.0	7.8	9.8	10.3	10.3	10.6	11.0	10.6	9.8	10.0	9.7	9.2	9.0	8.0	6.9	6.6	6.3	5.8	7.8
16	5.8	5.3	5.2	5.2	5.0	4.5	5.3	7.9	9.3	10.7	11.3	11.1	11.5	11.1	11.4	9.[illegible]	9.9	10.0	10.2	9.3	7.8	6.9	6.0	6.0	8.2
17	6.0	6.1	5.7	5.0	4.6	4.7	5.1	8.3	9.4	9.7	9.7	10.8	11.5	11.1	10.7	10.8	11.4	10.5	10.9	7.8	7.0	6.8	6.6	6.6	8.2
18	6.7	6.0	5.0	4.9	4.6	4.2	4.5	7.3	10.1	10.5	10.6	10.7	11.0	10.7	10.1	10.0	9.2	8.6	7.8	7.5	7.3	6.5	5.8	5.5	7.7
19	5.1	4.9	4.3	3.[illegible]	3.8	4.0	4.6	6.9	8.2	8.8	9.0	9.4	9.5	10.0	9.9	10.0	9.6	9.5	9.4	7.6	7.2	6.6	6.7	6.1	7.3
20	6.2	5.2	5.5	5.4	4.5	4.0	4.7	6.8	7.9	8.8	9.5	10.0	9.6	9.2	8.4	8.4	8.7	8.3	7.7	7.4	6.0	6.0	5.5	4.7	7.0
21	4.5	4.0	3.6	3.3	3.3	3.4	4.2	5.3	6.0	6.8	8.0	8.3	9.1	9.4	9.6	9.7	9.7	9.0	9.5	8.0	7.3	6.5	5.7	5.1	6.6
22	4.7	4.3	4.0	3.5	3.6	4.3	5.5	7.9	8.8	9.5	10.4	10.7	11.3	11.2	10.8	10.4	10.5	10.3	10.2	8.4	7.0	7.3	5.9	5.5	7.8
23	5.3	5.3	5.4	5.0	4.4	4.3	5.9	8.0	10.4	11.0	11.4	11.5	12.2	11.4	11.3	10.6	10.6	10.7	10.7	9.4	8.1	6.9	6.7	6.2	8.4
24	5.7	5.5	5.0	4.7	4.3	4.2	5.6	8.9	9.7	10.3	10.7	11.2	10.8	11.5	11.3	11.3	11.3	10.7	10.0	8.8	7.8	7.2	7.2	6.0	8.3
25	5.7	5.5	4.9	4.3	4.3	4.2	5.3	8.2	10.6	11.4	11.2	11.3	12.0	11.5	11.2	11.2	11.1	11.0	10.7	9.6	8.0	7.2	7.6	7.0	8.5
26	6.5	5.8	5.5	5.6	5.8	5.4	6.7	8.5	10.3	11.0	11.7	12.7	12.4	12.6	13.1	12.2	11.5	11.2	10.8	10.0	8.8	8.4	7.7	6.8	9.2
27	6.5	6.0	5.4	5.0	4.7	4.8	6.0	8.7	9.5	9.9	11.0	11.0	11.0	11.1	10.6	10.5	10.4	10.2	9.9	8.9	8.2	7.6	7.1	6.9	8.4
28	6.5	6.0	5.2	5.0	5.0	4.8	6.1	8.3	9.6	10.3	11.4	11.8	12.2	12.3	11.7	11.2	10.9	10.8	10.6	9.6	8.4	8.0	7.4	6.9	8.8
29	6.4	6.3	6.0	5.4	5.3	5.4	6.7	9.9	11.1	11.6	12.0	12.0	12.2	11.8	11.5	11.1	11.1	10.8	10.9	10.0	8.7	8.4	8.3	7.8	9.2
30	7.3	7.0	6.3	5.7	5.3	5.3	6.9	9.4	11.0	11.6	12.1	12.4	12.3	12.3	12.0	11.6	11.5	11.0	10.9	10.3	9.2	8.4	8.0	7.8	9.4
31																									
MEAN*	5.8	5.4	5.2	4.8	4.6	4.5	5.2	7.8	9.3	10.1	10.7	11.1	11.2	11.2	11.0	10.7	10.4	10.2	9.9	8.7	7.6	7.1	6.7	6.2	8.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 64

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1939 | SEPTEMBER 1939

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	265	260	240	235	240	250	230	235	240	255	260	270	280	260	250	250	230	230	225	235	240	240	250	247
2	260	265	255	245	240	230	250	240	250	260	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	260	250	250	250	250	270	280	240	p250	260	280	285	285	320	270	250	250	260	p260a	260	280	250	230	240	262
4	265	270	270	280	275	300	285	265	310	340	320	290	300	310	p280	250	245	240	230	225	250	280	250	250	274
5	p255a	260	290	270	p265a	p260a	255	230	235	260	265	270	295	280	275	265	255	250	235	240	245	240	245	230	257
6	250	255	245	240	290	280	275	240	240	250	270	290	p290b	285	275	270	250	255	235	220	225	250	255	260	258
7	270	265	260	225	250	250	250	240	245	p260b	270	260	290	290	310	280	260	230	240	235	235	245	255	245	257
8	240	240	255	250	270	265	245	230	230	260	265	260	335	265	260	280	245	250	220	225	235	240	235	240	252
9	250	250	245	235	255	255	260	235	240	250	260	275	275	260	260	255	240	235	235	230	230	255	270	245	250
10	245	245	240	230	290	315	295	250	240	250	270	265	260	290	260	240	225	240	240	230	215	235	245	260	253
11	265	275	275	235	245	325	295	245	230	270	250	280	290	285	250	250	235	240	230	215	225	240	245	255	256
12	235	235	230	225	265	290	255	230	225	220	260	265	270	260	270	250	230	245	230	220	240	230	225	235	243
13	240	240	250	250	255	250	255	235	225	220	255	270	250	280	225	230	215	240	230	210	230	235	250	255	241
14	250	245	230	220	240	255	245	240	230	240	260	280	280	270	275	p260b	250	240	235	225	240	260	265	270	250
15	250	245	220	220	235	265	275	245	255	260	270	280	285	275	235	270	230	240	235	220	230	240	245	250	249
16	250	240	250	240	230	235	265	240	230	260	255	270	280	275	260	250	225	250	240	220	225	230	250	255	247
17	260	240	230	215	240	265	265	235	250	255	260	280	285	290	270	270	235	235	225	220	260	275	300	260	255
18	250	250	285	295	280	315	300	255	255	270	275	300	285	290	265	265	250	240	235	250	235	235	250	250	266
19	255	250	275	245	260	270	265	240	270	290	290	305	300	300	315	290	270	250	220	225	230	270	245	285	267
20	270	270	275	250	280	240	290	245	305	310	310	315	325	310	330	320	285	245	245	230	235	265	245	p260a	277
21	280	265	290	300	295	295	285	245	300	350	335	310	300	290	310	250	230	245	240	225	225	235	250	240	275
22	240	255	255	250	265	275	250	240	250	280	275	295	285	295	290	300	230	250	235	210	250	250	225	275	259
23	275	295	260	240	250	250	245	235	265	260	270	300	280	265	290	260	285	245	240	220	220	235	255	245	258
24	250	255	245	225	255	275	250	245	240	260	290	285	270	310	310	300	275	245	230	225	245	245	255	260	260
25	260	250	220	260	255	265	260	240	265	265	265	310	275	275	270	265	280	250	235	225	220	280	260	265	259
26	245	250	265	285	260	260	245	240	265	255	285	290	300	300	265	225	230	240	250	235	235	260	230	280	258
27	270	260	250	250	285	285	265	240	255	260	275	270	265	270	260	285	260	240	245	230	250	250	255	255	260
28	280	270	280	270	290	280	260	240	250	265	280	270	280	285	255	250	240	245	240	225	230	250	245	255	260
29	245	250	245	235	260	280	255	250	235	270	270	270	305	p270	250	250	240	245	250	235	230	255	260	250	254
30	250	240	260	240	270	285	255	240	255	260	255	270	280	280	270	265	230	245	240	235	230	260	265	270	256
31																									
MEAN*	256	255	255	247	261	271	264	241	251	265	274	282	286	285	273	264	246	244	236	227	236	249	250	255	257

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 65

SEPTEMBER 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.6	5.0	5.3	5.2	5.0	4.3	4.4	...	...	...
2	...	...	4.3	4.9	...	...	...	...	...	...	...	...	...
3	...	...	...	5.0	5.3	5.3	5.3	5.4	5.3	4.7	...a	...	...
4	...	...	4.4	4.8	5.5	5.3	5.4	5.5	...	4.3	4.0	...	...
5	...	...	...	4.5	4.7	5.3	5.2	5.2	5.0	4.7	...	...	...
6	...	...	...	4.6	5.0	5.2	...b	...b	4.9	...	...	...	...
7	...	...	...	...b	...b	...b	5.8	5.9	6.0	5.1	...	...	...
8	...	...	...	4.7	5.1	5.1	6.5	5.1	5.1	5.1	...	...	...
9	...	...	...	4.7	4.9	5.1	5.3	5.1	5.1	...	...	...	...
10	...	...	...	...	5.1	5.2	5.1	5.3	4.8	...	...	...	...
11	...	...	...	4.5	4.9	5.1	5.2	5.4	4.8	...	...	...	...
12	...	...	...	...	4.9	5.1	5.1	5.2	5.1	4.8	...	...	...
13	...	...	...	...	5.0	4.8	5.1	5.0	...	...	...	...	...
14	...	...	...	...	5.1	4.8	5.3	4.9	4.9	...b	...	...	...
15	...	...	4.5	4.6	5.0	4.9	5.2	5.2	...	5.1	...	...	...
16	...	...	...	5.0	4.9	5.1	5.0	5.2	4.9	4.4	...	...	...
17	...	...	4.4	4.5	5.2	4.9	4.8	4.8	4.9	4.5	...	...	...
18	...	...	4.4	4.9	4.9	5.4	5.2	4.8	4.9	4.6	4.0	...	...
19	...	...	4.6	4.8	5.1	5.1	5.2	5.5	5.4	4.9	4.3	...	...
20	...	...	4.7	5.0	5.0	5.2	5.0	5.3	4.8	5.4	4.8	...	...
21	...	...	4.5	5.0	5.4	5.5	5.0	5.5	5.0	...	...	...	...
22	...	...	4.2	4.8	5.1	5.1	5.3	5.4	5.0	5.2	...	...	...
23	...	...	4.7	4.8	5.0	5.2	5.5	5.5	5.6	5.5	4.7	...	...
24	...	...	...	4.7	5.1	5.5	5.4	5.6	5.0	5.4	4.2	...	...
25	...	...	4.8	...	5.3	5.3	5.5	5.3	4.7	4.6	5.0	...	...
26	...	...	4.5	5.0	5.4	5.2	5.3	5.2	4.8	...	...	...	...
27	...	...	4.3	4.7	5.1	5.4	5.4	4.8	4.9	4.9	4.0	...	...
28	...	...	4.4	5.4	5.5	5.2	5.5	5.2	5.2	4.6	...	...	...
29	...	...	...	5.0	4.9	5.4	6.0	5.0	4.8	4.7	...	...	...
30	...	...	4.7	5.0	5.1	5.5	5.6	5.5	5.3	5.0	...	...	...
31													
* MEAN	...	...	4.5	4.8	5.1	5.2	5.3	5.2	5.0	4.8	4.4	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	210	230	230	220	200	210	210	...	...	...
2	...	...	240	225	...	...	...	...	...	...	...	...	...
3	...	...	...	230	220	220	215	220	220	220	...	...	...
4	...	...	250	260	220	260	230	210	...	230	225	...	...
5	...	...	...	230	230	200	230	225	230	220	...	...	...
6	...	...	...	230	230	220	...b	...b	235	...	...	...	...
7	...	...	...	...b	...b	...b	240	235	...a	250	...	...	...
8	...	...	...	230	220	220	215	230	230	250	...	...	...
9	...	...	...	230	230	220	215	220	230	...	...	...	...
10	...	...	...	...	220	225	230	220	220	...	...	...	...
11	...	...	...	225	210	210	210	250	225	...	...	...	...
12	...	...	...	...	215	220	210	210	215	230	...	...	...
13	...	...	...	...	220	210	220	205	...	...	...	...	...
14	...	...	...	...	220	210	220	200	235	...b	...	...	...
15	...	...	240	...b	220	210	220	230	...	230	...	...	...
16	...	...	...	240	210	220	215	210	220	210	...	...	...
17	...	...	220	205	190	210	200	220	220	230	...	...	...
18	...	...	250	230	220	200	210	200	220	225	220	...	...
19	...	...	230	225	215	205	215	220	220	230	230	...	...
20	...	...	240	230	220	230	220	210	220	225	250	...	...
21	...	...	245	220	230	210	210	220	220	...	...	...	...
22	...	...	235	220	220	210	200	220	220	230	...	...	...
23	...	...	240	215	215	210	215	210	200	240	230	...	...
24	...	...	...	220	210	210	230	210	220	220	230	...	...
25	...	...	245	...	220	200	215	215	225	220	230	...	...
26	...	...	230	230	220	210	210	230	220	...	...	...	...
27	...	...	230	225	220	220	215	210	230	220	230	...	...
28	...	...	230	225	205	210	230	210	230	220	...	...	...
29	...	...	...	230	230	230	210	220	235	240	...	...	...
30	...	...	240	230	220	220	210	220	225	240	...	...	...
31													
* MEAN	...	...	238	227	219	216	217	217	223	228	231	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 66

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1939 SEPTEMBER 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.9	1.0	1.0	1.4	1.1	1.2	1.0	1.0	2.4	0.7	0.6
2	...	...e	0.7	0.6	...	...	...	...	...	...	...	...	...
3	...	...	...	...	1.0	1.2	1.0	1.0	0.8	1.0	0.8	0.7	0.6
4	...	...	1.1	0.9	0.8	0.9	0.9	1.0	...	1.0	0.8	...e	...e
5	...	0.7	0.8	1.0	1.1	1.1	1.8	1.8	1.0	1.0	0.9	0.7	...e
6	...	0.6	0.9	0.8	1.1	1.1	...b	4.5	1.9	1.1	0.8	0.6	0.6
7	...	0.8	1.0	8.0	6.4	4.7	3.2	2.7	2.3	2.4	0.9	0.7	0.7
8	...	0.8	1.2	1.0	0.9	1.0	1.2	1.1	4.1	2.8	2.0	0.9	0.6
9	...	0.7	1.0	1.0	1.0	1.1	1.0	1.0	1.0	0.9	0.8	0.9	0.6
10	...	0.7	0.7	1.0	1.0	0.8	0.8	0.8	0.8	1.0	0.7	0.7	0.6
11	...	0.7	0.9	0.7	1.0	1.0	1.0	1.2	0.9	1.0	0.9	0.7	0.6
12	...	0.7	0.9	0.7	0.8	1.0	1.0	1.0	0.9	0.8	0.7	0.7	0.7
13	...	0.7	1.0	1.0	1.1	1.0	1.0	0.9	0.9	0.9	0.7	0.6	...e
14	...	0.7	0.9	1.9	1.0	1.1	1.5	1.3	1.3	7.5	1.2	0.6	0.7
15	...	0.6	1.1	4.1	1.2	1.9	1.2	1.0	2.2	1.1	0.9	0.7	0.6
16	...	0.7	1.0	1.0	1.0	1.2	1.0	1.0	0.9	0.8	0.7	0.6	0.6
17	...	0.6	0.7	1.0	0.9	1.0	0.8	0.8	0.8	0.7	0.9	...e	...e
18	...	0.7	1.0	0.8	0.7	0.7	1.0	0.8	0.8	0.7	0.6	...e	...e
19	...	0.6	0.9	0.8	0.9	1.0	0.9	1.0	0.8	0.9	1.0	0.8	...e
20	...	0.7	1.0	0.9	0.8	1.0	0.9	0.8	0.8	0.7	0.7	0.6	...e
21	...	0.6	0.8	1.0	1.1	1.3	1.3	1.2	1.3	0.9	0.7	0.7	0.7
22	...	0.8	1.0	1.0	0.9	0.9	0.9	1.0	1.0	0.8	0.7	0.6	0.6
23	...	0.7	0.8	1.0	1.0	1.1	1.0	1.0	0.9	1.0	0.8	0.6	0.8
24	...	1.3	0.8	1.1	1.0	1.0	1.0	0.8	0.7	0.7	0.7	0.7	0.6
25	...	0.7	0.8	1.0	1.2	1.0	1.0	1.1	1.0	1.0	0.7	0.6	...e
26	...	0.6	1.1	0.9	1.0	1.0	1.0	1.0	0.8	0.8	0.8	0.6	...e
27	...	0.7	0.8	1.1	0.9	1.1	1.2	1.1	1.0	0.9	0.8	0.7	0.6
28	...	0.7	1.1	1.3	1.4	1.7	1.8	1.8	1.7	1.3	1.0	0.7	0.6
29	...	0.8	1.0	2.2	2.0	1.1	1.0	1.1	1.0	1.0	1.2	0.7	0.6
30	...	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.0	1.0	0.8	0.7	p0.5
31													
MEAN*	...	0.7	0.9	1.4	1.2	1.2	1.2	1.3	1.2	1.3	1.0	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.2	2.5	3.0	3.4	3.7	3.8	3.9	3.8	3.7	3.4	3.6	2.5	1.4
2	1.1	2.5	3.1	3.4	...	...	...	...	...	...	...	...	...
3	...	1.2	...	...	3.7	3.8	3.9	3.6	3.7	3.4	...a	...a	...a
4	1.4	2.3	3.0	3.4	3.7	3.8	3.7	3.9	q3.7	3.6	3.2	2.5	1.6
5	1.2	2.4	3.1	3.3	3.7	4.0	3.8	3.9	3.8	3.5	3.2	2.5	1.7
6	1.3	2.5	3.0	3.3	3.6	3.7	...b	...b	3.8	3.3	3.3	2.6	1.6
7	1.6	2.6	3.4	...b	...b	...b	q3.8	3.7	...a	q3.7	3.5	2.7	1.7
8	1.5	2.5	3.1	3.5	3.7	3.9	4.0	3.9	...b	3.7	3.3	2.4	1.7
9	1.4	2.5	3.1	3.4	3.6	3.7	3.7	3.7	3.7	3.5	3.2	3.5	1.6
10	1.3	2.5	3.0	3.4	3.5	3.7	3.7	3.6	3.6	3.5	3.1	2.4	1.5
11	1.4	2.4	3.0	3.4	3.6	3.7	3.8	3.8	3.7	3.5	3.1	2.5	1.5
12	1.5	2.5	3.1	3.5	3.4	3.5	4.0	3.8	3.6	3.5	3.1	2.5	1.6
13	1.6	2.6	3.0	3.6	3.8	3.8	4.0	3.9	3.8	3.5	3.1	2.4	1.6
14	1.5	2.6	3.1	3.5	3.7	3.8	4.0	3.8	4.0	...b	3.6	2.6	1.6
15	1.6	2.5	3.0	...b	3.8	3.9	4.0	3.9	4.0	3.8	3.2	2.5	1.7
16	1.6	2.5	3.2	3.4	3.6	3.8	3.9	3.8	3.6	3.5	3.1	2.4	1.5
17	1.5	2.5	3.0	3.4	3.6	3.7	3.8	3.7	3.7	3.5	3.1	2.4	1.5
18	1.8	2.5	3.0	3.4	3.6	3.8	3.9	3.8	3.6	3.4	3.0	2.4	1.6
19	1.7	2.5	3.0	3.3	3.6	3.6	3.8	3.7	3.6	3.4	3.0	2.5	1.4
20	1.6	2.4	2.9	3.3	3.5	3.6	3.6	3.7	3.5	3.3	2.9	2.5	1.6
21	1.7	2.6	3.0	3.4	3.6	3.7	3.8	3.5	3.2	3.4	3.2	2.5	1.7
22	1.7	2.6	3.2	3.4	3.7	3.7	3.8	3.8	3.7	3.5	3.1	2.6	1.8
23	1.8	2.6	3.2	3.5	3.6	3.8	3.9	3.8	3.8	3.6	3.1	2.5	1.7
24	2.0	2.9	3.3	3.5	3.7	3.9	4.2	3.9	3.6	3.5	3.2	2.6	1.8
25	1.8	2.7	3.2	3.5	3.7	3.6	3.6	3.9	3.8	3.6	3.2	2.6	1.7
26	1.8	2.6	3.1	3.5	3.7	3.8	3.9	3.8	3.8	3.5	3.2	2.6	1.7
27	1.9	2.7	3.2	3.5	3.7	3.8	3.8	3.9	3.8	3.6	3.2	2.6	1.8
28	1.9	2.5	3.3	3.7	3.8	4.0	4.0	4.0	3.9	3.8	3.3	2.6	1.8
29	1.9	2.8	3.4	p3.8	4.0	4.1	4.2	4.0	3.9	3.4	3.5	2.7	1.8
30	2.2	3.0	3.4	3.7	4.0	4.0	4.1	4.2	3.9	3.7	3.3	2.6	1.9
31													
MEAN*	1.6	2.5	3.1	3.5	3.7	3.8	3.9	3.8	3.7	3.5	3.2	2.6	1.6

*=ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 67

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1939 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — OCTOBER 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	7.6	7.3	6.7	6.0	5.6	5.7	7.1	9.8	10.4	11.3	11.2	11.9	11.6	11.5	11.0	10.6	10.4	10.3	9.8	8.6	8.0	7.6	7.1	6.6	8.9
2	6.3	6.0	5.5	5.3	5.4	5.5	6.6	8.8	9.8	10.2	10.6	11.2	12.0	11.8	p11.4c	p11.1c	10.8	10.3	10.1	9.1	8.4	7.8	7.0	6.5	8.6
3	6.2	5.6	5.2	4.8	4.5	4.4	6.4	9.0	10.4	11.0	12.0	12.3	12.8	12.7	12.4	12.2	11.4	11.1	10.8	9.4	9.2	8.7	8.0	7.9	9.1
4	7.1	7.6	6.5	5.5	5.3	5.4	6.0	7.0	6.6	6.7	6.8	7.7	8.0	7.9	7.1	6.2	5.8	5.8	6.1	6.5	6.5	6.2	5.7	5.3	6.5
5	5.4	5.2	4.8	4.7	4.8	4.6	6.4	7.8	9.1	p9.5c	p10.0c	10.6	11.3	11.5	11.0	10.5	10.5	10.2	9.6	9.0	8.4	7.6	7.5	7.0	8.2
6	7.0	7.0	5.7	5.0	4.7	4.6	5.6	7.5	8.0	8.0	8.3	9.0	10.0	10.8	11.0	10.4	10.3	9.7	9.3	8.0	7.5	6.8	6.6	6.3	7.8
7	6.1	6.0	5.7	4.8	4.5	4.6	6.5	8.7	9.7	11.0	11.3	11.5	12.3	12.6	12.1	11.9	11.5	11.0	10.3	9.5	8.4	7.5	7.1	6.9	8.8
8	7.1	6.5	5.8	5.7	5.5	5.4	6.3	7.9	10.1	10.3	11.5	10.9	11.5	12.0	11.7	11.0	10.6	10.9	10.3	8.8	7.7	7.3	6.9	6.8	8.7
9	6.4	6.3	5.5	4.7	4.5	4.7	6.4	8.9	9.8	10.1	10.7	11.5	12.1	12.0	11.6	10.3	10.2	10.6	10.5	9.0	8.8	6.0	4.7	4.7	8.3
10	5.0	4.8	4.4	4.3	4.3	3.9	5.9	8.7	10.3	10.7	11.0	11.9	11.5	10.9	11.0	10.2	9.9	9.5	9.5	8.8	8.0	7.5	7.2	6.8	8.2
11	6.6	5.5	5.0	4.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
12	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
13	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.9	10.9	11.6	11.0	11.7	10.8	11.3	11.5	11.5	11.1	9.4	9.4	7.5	7.0	7.4	...
14	7.6	6.2	5.2	5.3	4.7	4.1	3.7	3.5	4.8	4.1	4.3	4.5	...	...	...	6.3	5.4	5.3	5.0	5.2	5.2	5.3	5.3	4.8	...
15	4.0	3.3	2.8	3.0	3.1	3.1	4.3	5.0	6.2	p7.2c	8.2	8.4	9.7	10.6	10.3	10.3	8.8	7.6	7.0	6.0	6.1	6.1	6.1	5.4	6.4
16	4.6	4.5	4.6	3.8	4.0	4.1	6.3	8.2	9.0	10.0	10.6	10.7	11.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
17	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.4	7.1	6.9	6.3	6.1	5.8	5.5	5.5	...
18	p5.2a	4.9	4.3	3.7	3.3	3.8	5.3	6.2	6.4	7.5	8.2	9.5	9.1	10.2	9.9	9.7	9.3	9.4	8.4	8.0	7.4	7.0	6.9	6.6	7.1
19	6.7	6.1	5.7	5.4	5.4	5.2	6.3	6.9	...c	...c	...c	...c	...c	...c	...c	10.0	9.5	9.4	9.2	8.6	7.5	7.7	6.7	7.1	...
20	6.6	6.0	5.8	5.4	4.9	4.9	7.0	8.2	9.3	9.9	10.0	9.6	10.2	10.3	10.0	9.8	9.9	9.2	9.1	8.6	8.0	6.9	6.3	5.7	8.0
21	5.7	5.5	5.5	5.3	5.0	5.1	...c	...c	9.3	9.8	10.3	10.7	...c	...c	11.4	11.3	10.9	10.9	10.0	9.5	8.8	8.0	7.6	7.1	...
22	7.5	7.3	6.5	5.8	5.9	5.8	7.3	8.9	9.0	8.7	9.7	10.7	10.9	11.0	10.8	10.6	10.2	10.5	10.6	9.6	8.3	7.5	7.2	6.7	8.6
23	6.7	6.7	6.2	5.8	5.3	5.6	7.8	8.5	9.8	10.6	10.7	10.9	11.4	12.0	12.0	11.7	11.1	10.7	10.5	9.6	9.0	7.9	7.9	7.1	9.0
24	7.3	6.5	6.2	5.8	5.8	5.2	5.4	5.7	6.8	7.8	8.4	9.6	10.4	10.2	10.1	10.4	10.0	9.8	10.0	9.5	8.6	8.0	7.9	7.6	8.0
25	7.3	6.6	6.0	5.4	5.5	5.5	7.5	8.8	9.8	10.6	11.3	11.6	11.7	11.5	11.4	11.4	11.3	10.8	10.8	10.0	9.2	8.1	8.2	7.6	9.1
26	7.8	7.5	6.5	6.1	5.6	6.0	8.5	10.2	10.6	11.0	12.0	12.3	12.7	12.8	12.4	12.0	p11.6c	p11.3c	11.1	10.7	10.0	9.3	9.0	9.2	9.8
27	8.1	7.3	6.8	6.5	5.7	5.8	8.1	9.6	10.3	11.3	11.6	12.0	12.3	12.6	12.3	11.9	11.5	11.2	11.0	10.3	9.3	8.5	8.4	8.1	9.6
28	8.0	7.5	6.6	6.1	5.9	6.0	8.4	9.6	...c	...c	...c	...c	...c	...c	...c	...c	11.6	12.0	11.5	11.0	9.2	8.6	8.4	8.4	...
29	8.1	7.3	6.7	6.3	6.0	6.0	7.4	8.8	9.7	10.0	11.2	11.6	11.8	12.0	12.2	11.6	10.8	10.3	9.8	8.6	8.0	7.8	7.1	7.0	9.0
30	6.8	6.6	6.0	6.0	5.7	5.7	7.0	7.8	8.4	8.9	9.5	10.3	11.3	11.4	12.0	11.7	11.0	10.8	10.1	10.0	9.3	8.3	8.0	7.9	8.8
31	7.8	7.9	7.4	6.8	7.0	7.2	8.4	9.3	10.0	10.0	11.4	12.0	12.4	12.6	12.0	11.5	11.2	11.5	11.0	10.4	9.0	8.3	7.9	7.8	9.6
MEAN*	6.7	6.3	5.7	5.3	5.1	5.1	6.6	8.0	8.9	9.5	10.1	10.6	10.9	11.1	10.9	10.6	10.2	10.0	9.6	8.9	8.2	7.5	7.1	6.8	8.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF_2 EQUAL TO OR LESS THAN f^oF_1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 68

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

OCTOBER 1939 (TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME) OCTOBER 1939

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	275	260	230	260	295	315	270	250	240	270	290	300	310	290	270	280	265	250	240	235	240	260	260	255	267
2	265	260	270	280	275	305	255	245	260	260	270	310	310	300	p285c	p275c	260	240	250	230	240	250	250	260	267
3	260	240	250	250	250	285	255	240	230	235	265	290	300	280	270	265	240	250	245	235	250	255	290	275	259
4	290	250	260	260	370	350	315	265	300	300	600	560	525	480	390	430	410	400	305	280	275	270	280	285	352
5	275	275	270	285	300	305	255	245	260	p275c	p285c	300	330	305	300	270	270	245	240	250	230	265	270	265	274
6	280	250	240	250	285	325	270	280	275	265	350	270	350	270	300	260	265	230	235	245	250	255	245	255	271
7	250	260	...a	...a	...a	305	260	235	250	275	270	260	285	290	260	255	230	240	235	225	225	245	260	290	...
8	265	280	275	280	285	290	260	235	265	280	270	p280b	290	300	265	260	230	255	230	220	225	240	235	275	262
9	265	250	240	230	315	300	255	245	p260c	270	270	295	290	270	275	250	225	250	225	230	220	235	280	305	260
10	320	300	240	295	275	295	250	240	270	260	275	290	270	300	300	275	260	250	290	240	250	255	255	265	272
11	235	220	255	...a	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	280	300	290	310	310	335	350	290	240	240	250	235	250	290	295	...
14	270	230	225	305	385	400	680	310	260	225	270	225	210	280	320	290	455	300	300	280	325	310	290	275	309
15	270	...a	350	360	330	325	285	320	280	p290c	300	365	305	330	300	270	260	230	260	250	290	275	250	...a	...
16	...a	...a	...a	300	310	295	290	260	280	290	270	290	300	...a	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	365	270	250	245	260	255	...a	...a	...
18	...a	...a	...a	350	...a	...a	275	300	370	360	360	310	355	320	320	270	240	250	240	225	...a	285	...a	...a	...
19	...a	290	290	300	260	300	270	280	...	...	...	...	...	...	...	270	250	290	245	230	250	275	270	275	...
20	265	270	...a	...a	...a	300	265	230	270	285	300	290	315	300	300	240	270	260	250	260	270	260	255	...a	...
21	...a	...a	...a	...a	...a	...a	250	230	245	270	290	290	p310	p300	300	300	250	260	240	250	240	255	275	310	...
22	280	255	265	...a	...a	300	250	260	235	290	320	320	315	230	335	300	280	280	255	230	235	265	280	275	...
23	330	300	235	265	295	320	265	240	275	285	290	310	300	300	325	315	290	255	250	235	245	265	285	300	282
24	290	300	295	315	265	295	260	250	400	350	360	345	320	340	315	280	250	250	255	245	240	260	265	275	292
25	270	260	250	275	300	295	250	255	275	260	300	300	300	350	325	310	245	245	250	230	235	255	275	280	275
26	275	245	235	250	275	290	245	235	220	265	295	320	300	310	310	300	p260c	p250c	250	250	240	250	...a	250	...
27	250	250	265	255	255	330	260	265	270	280	280	330	280	310	300	290	280	240	250	240	230	245	265	260	270
28	260	240	235	250	285	300	250	260	...	...	...	...	...	...	...	...	310	280	250	235	220	265	275	265	...
29	255	250	260	270	285	325	245	270	320	310	300	320	350	330	315	300	290	245	250	235	270	255	275	280	284
30	300	260	280	265	285	295	255	240	275	275	350	350	330	340	310	280	280	255	250	260	245	245	295	300	284
31	285	265	250	265	290	270	235	235	235	275	305	300	290	310	280	280	265	275	250	230	235	255	290	280	269
MEAN*	274	261	259	279	294	309	277	256	273	280	309	324	313	310	304	287	278	260	251	242	247	259	270	277	279

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 69

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1939 OCTOBER 1939

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	5.5	5.5	6.1	6.6	5.2	5.0	5.0	4.4	...	...
2	...	...	4.9	5.0	5.3	5.5	5.5	5.5	...c	...c	...	...	...
3	...	...	...	...	5.1	5.6	5.5	5.5	5.3	4.8	...	...	...
4	...	...	4.4	4.7	5.4	5.4	5.2	5.1	5.1	5.0	4.9	4.4	...
5	...	...	4.8	...	...	5.3	5.6	5.6	...a	5.5	4.2	...	...
6	...	4.1	4.6	5.0	5.6	4.6	5.4	4.6	5.2	4.4	4.4	...	...
7	...	...	4.3	5.0	4.9	5.5	5.2	5.3	4.8	4.8	...	...	...
8	...	...	4.8	4.9	5.0	...b	5.6	5.6	4.8	4.5	...	...	...
9	...	...	...	5.1	5.0	5.4	5.3	5.1	5.5	4.7	...	...	...
10	...	...	4.7	4.9	...	5.1	5.2	5.5	5.3	4.9	4.3	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	4.9	5.0	5.2	5.5	5.5	5.5	5.6	4.4	...	...
14	...	...	...	...	...	...	5.0	4.0	4.1	4.4	4.3	3.6	...
15	...	4.1	4.3	...	...	5.3	5.5	5.3	5.2	4.5	4.1	...	...
16	...	...	5.3	...	...	5.2	5.3	...c	...c	...c	...c	...	...
17	...	...	...	...	...	...	...	...	...	...	4.7	...	...
18	...	...	5.2	5.1	5.2	5.3	5.3	5.4	5.2	...	...	...	...
19	...	4.1	...c	...c	...c	...c	...c	...c	...c	5.1	...	...	...
20	...	...	5.0	4.8	5.4	5.4	5.8	5.1	5.2	...	4.3	...	...
21	...	...	...	5.5	5.5	5.0	...	...	5.5	5.4	...	...	...
22	...	4.1	...	5.0	5.6	5.6	5.6	5.6	5.5	5.4	4.6	4.3	...
23	...	...	4.8	5.4	5.5	5.6	5.5	5.4	6.1	5.4	5.3	...	...
24	...	...	5.2	5.4	5.6	6.0	5.6	5.5	5.7	5.5	...	...	...
25	...	4.3	4.8	5.2	5.6	6.0	5.7	6.2	6.0	5.6	...	...	...
26	...	...	...	5.4	5.6	6.1	5.4	5.5	5.6	5.5	...	...	...
27	...	4.4	5.3	5.4	5.5	6.1	5.3	6.0	5.5	5.6	4.9	...	...
28	...	4.3	...c	...c	...c	...c	...c	...c	...c	...c	5.4	4.8	...
29	...	4.4	5.5	5.6	5.5	5.6	6.6	5.7	6.0	5.6	5.3	...	...
30	...	...	5.3	5.3	6.2	6.2	6.0	6.4	5.7	...	4.7	...	...
31	...	...	...	5.0	5.9	5.6	5.3	5.6	5.0	...a	...a	...	...
MEAN*	...	4.2	4.9	5.2	5.4	5.5	5.5	5.4	5.3	5.1	4.6	4.3	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	220	210	220	220	220	220	230	215	...	...
2	...	...	220	215	200	200	215	220	...c	...c	...	...	...
3	...	...	...	...	220	210	225	225	220	230	...	...	...
4	...	...	250	250	230	240	250	250	250	240	250	260	...
5	...	...	230	...	...	210	210	240	...a	230	240	...	...
6	...	250	220	250	205	200	210	230	230	240	230	...	...
7	...	...	220	210	210	200	215	230	220	230	...	...	...
8	...	...	240	220	220	...b	...b	210	220	230	...	...	...
9	...	...	...	220	210	200	220	220	210	215	...	...	...
10	...	...	240	250	...	230	...	240	240	230	230	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	220	210	220	220	210	210	230	250	...	...
14	350	...	...	...	...	...	...	240	250	240	250	265	...
15	...	245	235	...	200	260	220	230	250	240	240	...	...
16	...	...	240	...	...	200	210	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	250	230	210	200	210	220	215	...	...	...	...
19	...	240	...	...	...	...	...	...	...	245	...	...	...
20	...	...	230	230	...a	...a	...	...	220	...	230	...	...
21	...	...	...	245	250	220	...	...	230	250	...	...	...
22	...	245	...	230	220	210	230	240	220	250	240	250	...
23	...	...	230	215	220	220	215	240	240	230	230	...	...
24	...	...	240	220	215	200	210	225	220	230	...	...	...
25	...	240	230	215	210	220	210	220	220	240	...	...	...
26	...	...	...	230	...a	...a	225	230	230	240	...	...	...
27	...	250	225	220	220	240	220	220	225	230	240	...	...
28	...	240	...	...	...	...	...	...	...	...	250	240	...
29	...	230	225	260	250	200	230	230	220	230	230	...	...
30	...	...	230	220	210	200	250	250	240	...	230	...	...
31	...	...	...	220	...a	200	220	230	235	...a	...a	...	...
MEAN*	350	242	233	228	217	214	221	229	228	235	237	254	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 70

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1939 OCTOBER 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.8	1.0	1.0	1.1	1.8	1.8	1.0	1.0	1.0	1.0	0.9	...e
2	...e	0.8	1.0	1.0	1.0	1.0	1.1	1.0	p1.0c	p1.0c	0.7	0.6	0.6
3	0.6	0.7	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	0.8	...e
4	...e	0.7	1.2	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.7	0.6	...e
5	...e	0.6	1.1	...c	...c	1.9	1.4	1.8	1.1	1.7	1.0	0.7	0.6
6	...e	0.9	0.8	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.8	0.6	0.9
7	0.7	0.7	1.0	1.0	1.0	1.2	1.2	1.3	1.1	0.8	0.7	0.6	...e
8	0.6	0.8	0.8	1.0	2.0	...b	4.4	1.1	1.0	0.9	0.7	0.6	0.6
9	0.7	0.7	p0.9c	1.0	1.1	1.0	0.9	1.0	0.9	0.8	0.8	0.7	0.6
10	0.6	0.7	0.9	0.9	1.0	1.0	1.0	0.9	1.1	0.7	0.6	...e	...e
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	0.9	1.0	1.0	1.1	1.0	1.0	0.8	0.8	0.7	0.6
14	...e	0.7	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.7
15	0.6	0.7	0.8	p0.9c	1.0	1.0	2.0	2.0	1.0	1.0	0.8	0.7	...e
16	0.6	0.8	0.9	0.9	1.1	1.0	1.0	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	0.8	0.6
18	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	2.3	1.0	0.8	...e
19	...e	0.7	...	...	...	...	...	...	...	1.1	0.9	0.6	0.6
20	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	...e
21	...e	0.6	0.9	1.0	2.3	1.0	p1.0c	p1.0c	1.1	1.1	0.9	0.6	0.6
22	0.6	0.7	0.9	1.4	0.9	1.1	1.0	2.3	2.7	0.9	1.0	0.8	0.7
23	0.6	0.6	0.8	1.1	0.9	1.8	1.0	1.0	1.0	0.9	0.6	0.6	0.7
24	...e	...e	0.7	1.0	1.0	1.1	1.0	1.2	1.1	1.0	0.8	0.6	...e
25	...e	...e	0.7	0.9	1.0	1.0	1.0	1.0	1.0	0.7	0.9	0.6	0.6
26	...e	0.6	0.8	1.0	1.0	1.0	1.3	1.1	1.3	p1.2c	p1.0c	0.8	...e
27	...e	0.7	0.7	1.0	2.2	1.0	1.1	1.1	1.1	0.9	0.9	0.8	0.7
28	0.7	0.7	...	...	...	...	...	...	...	...	0.8	0.8	0.6
29	0.7	0.7	1.0	1.0	1.1	1.0	1.0	0.9	1.0	0.9	0.7	0.7	0.7
30	0.6	0.7	0.9	1.0	1.0	1.0	0.9	0.9	0.9	2.1	1.1	0.7	0.7
31	...e	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.0	1.1	1.0	0.7	0.6
MEAN*	0.6	0.7	0.9	1.0	1.2	1.1	1.2	1.2	1.1	1.1	0.9	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.0	2.8	3.5	3.5	3.6	3.9	3.9	3.8	3.9	3.7	3.3	2.7	1.8
2	2.0	2.7	3.3	3.5	3.7	4.0	3.9	3.9	p3.9c	p3.6c	3.3	2.7	1.9
3	2.2	2.8	3.3	3.7	3.7	3.7	4.1	4.1	4.0	3.7	3.2	2.5	1.8
4	2.0	2.7	3.3	3.5	3.6	3.7	3.8	3.8	3.7	3.5	3.2	2.6	1.8
5	2.1	2.8	3.2	p3.4c	p3.6c	3.8	3.9	4.0	p3.7a	3.3	3.3	2.6	1.9
6	2.0	2.7	3.2	3.7	3.7	3.8	3.9	3.9	3.8	3.5	3.1	2.6	1.8
7	2.0	2.6	3.1	3.5	3.7	3.8	4.0	3.9	3.8	3.6	3.2	2.7	1.7
8	2.0	2.8	3.2	3.4	3.9	p3.9b	p4.0b	4.0	3.8	3.5	3.1	2.6	1.6
9	2.2	2.7	p3.2c	3.6	3.6	3.8	3.8	3.7	3.6	3.5	3.1	2.5	1.7
10	2.2	2.9	3.1	3.4	3.6	3.7	3.7	3.8	3.7	3.4	2.9	...a	...a
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
12	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
13	...c	...c	...c	3.5	3.6	3.8	4.0	3.8	3.6	3.4	3.1	2.5	1.8
14	2.2	2.7	3.0	3.4	3.4	3.7	3.6	3.4	3.5	3.3	3.0	2.5	1.9
15	2.1	2.5	3.0	p3.3	3.6	3.5	3.7	3.8	3.6	3.3	3.0	2.4	2.0
16	2.1	2.7	3.2	3.4	3.6	3.7	3.7	...c	...c	...c	...c	...c	...c
17	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.4	1.9
18	2.3	2.8	3.3	3.6	3.7	3.5	3.4	3.6	3.5	3.5	3.5	2.7	1.9
19	2.2	2.8	...c	...c	...c	...c	...c	...c	...c	3.6	3.1	2.5	2.0
20	2.4	2.8	3.3	3.6	3.7	3.8	3.9	3.6	3.9	3.8	3.3	2.7	2.0
21	2.3	3.0	3.5	3.8	3.8	3.7	p3.7c	p3.7c	3.7	3.6	3.3	p2.7a	2.0
22	2.3	2.9	3.4	3.6	3.8	4.0	3.9	3.8	3.9	3.7	3.4	2.7	2.0
23	2.4	2.9	3.4	3.6	3.7	4.0	3.9	3.9	3.7	3.5	3.2	2.4	2.0
24	2.5	2.8	3.2	3.6	3.8	3.9	3.7	3.7	3.8	3.6	3.3	2.8	1.9
25	2.3	2.9	3.3	3.8	3.9	4.1	4.0	4.0	4.0	3.8	3.3	2.8	2.0
26	2.4	3.0	3.3	3.6	3.8	3.8	3.8	3.8	3.8	3.7	...c	...c	...a
27	2.2	2.9	3.3	3.7	3.7	3.9	4.0	3.9	3.8	3.6	3.3	2.7	2.0
28	2.4	2.9	...c	...c	...c	...c	...c	...c	...c	...c	3.4	2.7	2.0
29	2.4	2.9	3.4	3.6	3.8	3.8	4.0	3.8	3.8	3.6	3.3	2.7	1.9
30	2.3	3.0	3.3	3.6	3.8	3.8	3.8	3.8	3.7	3.8	3.3	2.4	p2.0a
31	2.4	2.9	3.4	3.6	3.8	3.8	3.8	3.7	3.5	3.6	3.0	2.3	2.1
MEAN*	2.2	2.8	3.3	3.6	3.7	3.8	3.8	3.8	3.8	3.6	3.2	2.6	1.9

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 71

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1939

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	7.4	7.4	7.5	7.0	7.0	6.2	6.7	7.4	8.0	9.1	9.7	11.0	11.6	12.1	12.5	12.2	11.5	11.3	11.0	10.3	9.5	9.3	8.5	8.8	9.3
2	8.3	7.6	6.6	6.1	5.7	5.5	6.2	7.2	8.5	8.9	10.6	11.3	11.5	11.8	11.4	11.8	10.9	11.0	10.9	9.3	8.4	7.0	6.8	6.5	8.8
3	6.4	6.4	6.0	5.2	4.5	4.9	7.1	8.2	8.3	8.8	9.6	10.9	11.3	12.0	12.0	11.5	11.0	10.7	10.2	9.3	8.4	7.5	7.5	7.3	8.5
4	7.1	6.6	5.6	5.4	5.3	5.5	7.0	7.9	8.8	10.4	11.0	11.1	11.5	12.4	12.4	11.0	11.0	10.8	10.9	10.6	8.8	7.7	7.3	6.9	8.9
5	6.8	6.2	6.1	5.9	5.8	6.0	7.1	7.8	8.8	9.3	10.5	11.4	11.5	12.0	11.9	11.2	11.2	10.7	10.0	9.6	8.3	7.8	7.7	7.3	8.8
6	7.5	7.0	6.8	6.1	5.3	5.0	5.4	5.4	5.8	5.8	6.2	6.5	7.0	6.9	p7.0c	p7.0c	7.0	7.2	7.6	7.1	6.8	6.5	6.1	6.0	6.5
7	5.9	6.1	5.6	5.2	5.0	5.4	6.6	7.7	8.2	8.0	8.4	8.8	9.1	9.4	9.1	8.8	8.2	8.3	8.1	7.7	6.8	6.0	6.2	6.0	7.3
8	5.8	5.5	5.3	5.5	5.5	6.4	7.3	7.2	8.3	8.5	9.5	10.3	11.0	10.3	10.0	10.0	9.8	9.7	9.2	9.1	8.4	7.4	6.6	6.2	8.0
9	6.7	6.6	5.9	4.7	4.3	4.7	6.5	7.8	8.4	8.5	8.4	8.7	9.5	9.7	9.5	9.3	8.8	8.3	8.1	7.8	6.8	6.4	6.0	5.9	7.4
10	5.8	5.4	5.5	5.4	4.7	5.2	6.2	6.0	6.3	6.5	7.0	7.4	7.7	7.8	7.8	7.5	7.5	7.6	6.8	6.5	6.1	5.8	5.5	5.5	6.4
11	5.9	5.8	5.3	5.0	4.4	4.8	6.6	7.1	7.8	8.6	9.9	11.0	11.5	11.1	10.7	10.0	9.8	9.8	9.8	9.2	8.4	7.6	7.0	7.1	8.1
12	7.1	6.9	6.7	5.4	4.7	5.0	6.1	6.6	6.7	7.2	p8.0c	p9.0c	9.9	10.0	10.2	9.8	9.0	9.4	9.0	9.0	8.1	7.6	7.2	7.0	7.7
13	6.8	6.9	6.0	5.5	5.3	5.5	6.9	7.2	8.2	8.9	9.8	11.0	11.0	10.7	11.5	11.0	10.9	10.2	9.3	9.8	8.6	9.9	9.3	8.8	8.7
14	8.4	7.1	6.0	5.0	4.5	4.4	5.3	6.4	7.4	9.3	10.1	9.6	10.5	11.1	11.0	10.7	10.0	9.5	8.7	8.4	7.7	7.8	7.0	6.8	8.0
15	6.5	5.9	5.4	5.7	5.2	5.8	6.2	6.3	6.7	7.1	8.2	8.9	9.6	9.8	9.5	8.6	8.3	8.1	8.4	8.3	7.7	6.9	6.2	6.1	7.3
16	5.9	6.1	5.3	5.3	5.0	5.2	7.0	8.1	9.2	10.2	p10.5c	10.7	11.0	11.4	11.5	11.0	10.3	9.9	9.3	9.4	8.7	8.2	7.8	7.4	8.5
17	7.3	6.9	6.3	5.7	5.6	6.2	8.3	8.4	8.4	8.6	9.5	10.5	11.5	11.2	11.2	10.8	10.6	10.3	10.0	9.5	9.1	8.4	7.6	7.4	8.7
18	7.5	7.4	6.6	6.1	6.1	6.1	7.0	7.8	8.4	9.0	9.6	10.3	11.1	11.5	11.2	10.8	10.5	9.7	9.9	10.2	8.9	8.3	8.0	7.7	8.7
19	7.5	7.2	6.7	6.5	6.4	6.2	7.1	7.0	7.5	8.4	9.2	10.2	10.7	11.0	11.3	11.0	10.7	10.6	10.4	9.7	9.3	8.0	7.5	7.4	8.6
20	7.4	7.8	6.4	6.5	6.3	6.4	9.7	10.5	9.5	9.7	10.2	10.8	11.4	11.1	10.5	10.0	9.5	8.4	8.0	7.9	7.3	6.9	6.8	6.9	8.6
21	6.8	5.4	5.1	5.1	4.8	5.0	6.1	6.5	6.0	6.3	7.0	6.8	6.9	7.3	7.7	7.5	7.3	7.2	7.2	7.0	6.9	6.8	6.7	6.6	6.5
22	6.8	6.4	5.4	4.9	4.6	5.0	7.3	8.8	9.3	10.4	11.1	12.0	11.8	11.6	11.5	11.2	10.8	10.5	10.0	9.7	8.7	8.3	8.0	7.9	8.8
23	7.7	7.3	6.5	6.1	5.8	5.9	6.9	8.6	9.3	10.0	10.5	10.9	11.4	11.6	11.3	11.1	10.8	10.8	10.5	10.2	9.0	8.0	7.2	6.7	8.9
24	6.8	7.0	7.0	6.8	6.4	6.3	8.0	8.1	9.0	10.0	10.9	11.2	11.2	11.4	11.4	11.9	11.4	11.0	10.6	10.2	9.1	8.3	8.0	7.5	9.2
25	7.6	7.6	6.9	6.3	5.8	5.2	5.4	5.1	6.0	7.1	7.5	8.4	9.5	9.5	9.8	9.6	10.2	9.2	9.1	8.6	7.8	7.1	6.9	7.2	7.6
26	7.1	6.5	5.8	5.0	4.6	4.2	5.0	6.8	8.1	9.2	9.6	9.5	9.6	10.6	10.2	9.5	9.5	9.4	8.8	8.9	7.4	7.0	6.8	6.4	7.7
27	6.6	6.3	5.8	5.5	5.0	5.4	7.0	7.2	8.1	9.3	10.1	10.5	11.0	10.5	10.6	11.0	10.3	9.9	10.2	9.8	8.8	7.5	6.6	6.6	8.3
28	6.3	5.9	5.5	4.9	4.9	5.0	6.5	p7.5c	p8.5c	9.0	9.8	10.3	10.4	10.5	10.6	10.4	10.2	10.0	9.5	9.1	8.9	7.8	7.4	7.3	8.2
29	7.2	7.6	7.2	6.0	6.0	6.4	8.3	10.0	11.1	10.7	10.8	11.5	11.7	11.8	11.8	11.5	10.9	9.9	9.4	8.9	7.8	7.6	7.0	6.3	9.1
30	6.7	6.1	5.8	5.5	5.3	5.3	5.9	6.5	7.2	6.8	6.8	7.2	7.2	7.4	7.8	8.4	8.3	7.9	7.8	7.9	7.0	6.2	6.0	5.9	6.8
31																									
MEAN*	6.9	6.6	6.1	5.6	5.3	5.5	6.8	7.4	8.1	8.6	9.3	9.9	10.4	10.5	10.5	10.2	9.9	9.6	9.3	9.0	8.1	7.5	7.1	6.9	8.1

* = ALL TABULATED VALUES a = NOT MEASURABLE DUE TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 72

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — NOVEMBER 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	300	300	...a	...a	295	280	250	240	300	295	310	310	300	330	295	280	275	285	260	...a	...a	...a	...a	275	...
2	290	265	270	310	290	275	250	250	275	280	300	310	280	325	285	300	250	270	250	220	225	270	290	280	275
3	280	265	250	250	260	295	245	240	305	325	350	330	325	320	295	295	285	270	250	240	240	265	275	290	281
4	275	250	260	p265a	275	p260a	250	245	290	300	295	310	310	300	295	300	300	239	255	235	225	260	260	280	272
5	275	...a	...a	...a	280	300	255	250	250	335	325	310	300	300	290	310	290	270	240	230	...a	270	275	...a	...
6	265	265	265	295	310	305	360	360	410	510	450	465	400	420	...c	...c	340	285	265	...a	...a	...a	300	310	...
7	295	...a	...a	...a	...a	280	260	305	300	370	360	350	350	345	325	300	300	275	250	245	225	260	285	280	...
8	280	275	290	285	260	240	230	270	350	330	320	310	290	290	305	290	280	270	250	245	230	250	270	p270a	278
9	p260a	260	260	p260a	p270a	270	225	230	300	320	360	370	370	370	360	330	310	275	255	235	230	265	275	280	289
10	...a	...a	280	255	250	265	250	310	370	430	400	410	380	375	350	350	320	290	240	245	250	290	...a	...a	...
11	...a	...a	...a	...a	...a	275	225	230	290	310	340	310	305	290	300	300	290	265	250	250	245	255	290	290	...
12	280	270	260	...a	...a	275	240	300	...c	400	...c	...c	340	325	310	305	305	285	260	235	245	260	275	280	...
13	285	250	235	270	275	285	250	330	325	330	350	330	330	400	320	305	300	280	250	275	280	280	255	260	294
14	265	240	280	280	290	290	275	245	305	300	300	280	310	310	300	290	280	250	250	240	265	250	...a	...a	...
15	p270a	280	275	300	305	290	250	330	350	395	p390a	380	345	320	320	320	300	260	250	250	240	260	280	255	301
16	290	240	p230a	225	265	265	235	265	250	270	p290c	315	305	315	310	300	280	270	250	240	235	265	255	280	269
17	255	255	255	275	265	285	240	240	300	325	345	325	320	320	310	300	295	265	250	245	250	260	275	300	281
18	295	265	260	260	270	270	245	230	300	310	340	335	325	310	315	310	280	225	265	245	220	275	260	280	279
19	265	265	290	265	275	275	270	300	315	320	315	320	310	325	310	300	285	265	250	240	240	235	...a	...a	...
20	...a	...a	...a	...a	350	290	235	240	240	...a	320	360	330	330	335	325	290	275	260	245	270	...a	...a	270	...
21	260	250	250	275	260	275	250	360	...a	490	400	440	440	420	390	390	375	325	255	255	250	275	280	280	...
22	250	235	...a	...a	...a	250	235	250	270	305	310	305	290	310	320	300	290	280	245	245	240	240	260	255	...
23	260	250	250	260a	275	250	235	220	250	295	330	310	330	320	330	315	295	290	255	230	235	240	255	270	273
24	300	325	p310a	300	270	260	250	p270a	290	320	315	315	315	235	330	315	290	275	260	250	250	265	265	285	286
25	330	p300a	270	280	300	300	350	225	410	385	365	375	350	350	335	345	310	240	255	225	260	265	295	285	309
26	270	270	275	280	270	285	280	250	365	p340a	325	330	370	360	300	350	310	290	255	245	240	245	270	p280a	294
27	285	260	265	250	275	265	245	260	p290a	320	320	340	330	320	350	300	280	260	255	250	240	230	...a	...a	...
28	265	285	265	280	270	265	235	...c	...c	320	340	330	335	340	325	315	300	275	245	250	235	235	260	260	...
29	p265a	270	250	230	275	265	230	260	275	285	325	320	320	325	310	300	285	275	245	230	275	270	260	260	275
30	260	260	255	265	260	265	225	360	320	400	445	385	415	420	400	360	330	300	270	255	225	275	...a	...a	...
31																									
MEAN*	277	266	265	270	278	275	252	271	307	342	343	341	334	334	321	314	297	272	253	243	243	260	272	277	288

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 73

NOVEMBER 1939

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1939

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	5.2	5.2	5.4	5.4	5.5	5.6	4.9	...	...	...	...
2	...	...	4.6	5.5	5.5	5.6	5.7	6.0	5.6	5.5	...	...	...
3	...	...	5.1	5.0	5.3	5.2	5.5	...a	5.1	5.2	5.2	...	...
4	...	...	5.3	5.2	5.3	5.4	5.5	5.6	5.1	5.4	4.7	...	...
5	...	...	...	5.3	5.5	5.5	5.5	5.5	5.2	5.5	5.3	4.4	...
6	3.5	4.4	4.6	4.8	4.9	5.0	5.1	5.1	...c	...c	4.5	...	...
7	...	4.7	4.8	4.9	5.2	5.0	5.3	5.4	5.2	5.0	5.0	4.2	...
8	...	4.6	5.5	5.3	5.0	5.4	5.3	5.3	5.3	5.1	5.0	4.4	...
9	...	...	5.0	5.0	5.2	5.1	5.2	5.1	5.0	4.9	4.6	4.3	...
10	...	4.4	4.6	5.0	4.9	5.0	5.2	5.0	5.0	5.0	4.7	4.0	...
11	...	...	5.2	5.1	5.4	5.2	5.3	5.3	5.1	5.2	4.5	4.2	...
12	...	...	...	5.1	...	...	5.4	5.3	5.2	5.2	4.8	...	...
13	...	5.2	.5.4	5.3	5.6	5.4	5.4	5.5	5.3	5.1	4.8	4.2	...
14	...	...	5.1	5.1	5.2	5.1	5.4	5.1	5.0	4.8	4.9	...	...
15	...	4.8	5.1	5.4	...a	5.5	5.1	5.4	5.5	5.2	4.7	...	...
16	...	4.7	4.8	5.5	...	5.4	5.5	5.5	5.1	5.2	4.8	...	...
17	...	...	5.4	5.5	5.7	5.6	5.8	5.5	5.3	5.3	5.0	5.1	...
18	...	...	5.4	...a	5.5	6.0	5.7	5.5	5.5	5.5	4.7	...	...
19	3.6	4.7	5.4	5.4	5.7	5.5	5.6	5.6	5.8	5.5	5.3	4.5	...
20	...	...	...a	...a	5.6	5.8	5.6	5.6	5.6	5.2	4.8	4.2	...
21	...	4.8	...a	5.0	5.0	5.1	5.1	5.1	5.1	5.0	5.0	4.6	...
22	...	4.7	4.9	5.6	5.7	5.8	5.4	5.4	5.9	5.0	5.0	4.5	...
23	...	...	...	5.4	5.4	5.5	5.6	5.6	5.6	5.5	4.8	4.5	...
24	3.5	...a	5.1	5.6	5.3	5.6	5.7	5.8	5.5	5.5	4.9	...a	...
25	4.1	...	4.8	...a	5.6	5.5	5.7	5.6	5.5	5.6	5.2	...	...
26	...	...	5.6	...a	5.6	5.5	5.6	5.6	5.5	5.3	4.9	4.9	...
27	...	4.3	...a	5.3	5.6	6.0	5.5	5.5	5.8	5.2	5.2	...	...
28	...	...c	...c	5.4	5.3	5.6	5.6	5.4	5.3	5.0	4.8	4.5	...
29	...	...	...	5.3	5.5	5.6	...a	5.2	5.4	5.4	4.8	4.0	...
30	...	4.9	4.8	5.4	5.3	5.1	5.3	5.2	5.4	5.1	4.9	4.3	3.3
31													
* MEAN	3.7	4.7	5.1	5.2	5.4	5.4	5.4	5.4	5.3	5.2	4.9	4.4	3.3

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	240	260	270	p255	240	250	215	...	...	...	...
2	...	...	210	225	220	220	230	230	250	250	...	...	...
3	...	...	230	220	p220	220	220	...a	220	210	215	...	...
4	...	...	230	230	230	230	220	215	220	225	230	...	...
5	...	...	...	220	215	215	225	220	230	240	240	230	...
6	260	230	220	270	200	200	210	270	...c	...c	230	...	...
7	...	240	250	...a	...a	...	...	240	210	235	230	230	...
8	...	...a	...a	...a	230	220	200	...a	200	210	225	230	...
9	...	...	...a	220	205	p240	220	230	...	...a	...a	...a	...
10	...	220	215	235	210	210	230	225	220	225	220	230	...
11	...	...	230	200	210	220	210	210	230	220	225	220	...
12	...	...c	...c	220	...c	...c	220	240	p240	240	230	...	...
13	...	240	235	280	230	220	250	230	225	225	230	240	...
14	...	...	210	230	210	225	200	230	220	240	220	...	...
15	...	235	250	215	...a	215	240	230	290	...a	220	...	...
16	...	230	p225	220	p230c	245	200	220	225	240	230	...	...
17	...	...	240	260	250	200	260	225	215	220	225	250	...
18	...	...	260	...a	225	200	230	250	235	230	215	...	...
19	240	230	215	280	225	205	200	205	220	225	230	235	...
20	...	...	...a	...a	200	220	220	220	230	220	225	240	...
21	...	230	...a	205	230	200	205	200	220	230	240	230	...
22	...	225	220	...a	280	220	220	...a	210	210	220	230	...
23	...	...	...	200	200	240	220	220	230	240	225	240	...
24	240	...a	230	210	...a	...a	260	220	210	260	...a	...a	...
25	240	p230	220	...a	...a	...a	...a	...a	...a	...a	230	...	...
26	...	...	...a	...a	...a	200	200	230	230	220	230	220	...
27	...	230	...a	210	...a	200	200	215	220	230	...a	...	...
28	...	...c	...c	210	200	200	190	230	215	210	220	210	...
29	...	...	...	210	210	200	...a	195	210	210	230	225	...
30	...	230	...a	210	250	205	260	270	210	230	270	250	230
31													
* MEAN	245	231	229	228	224	215	221	228	224	228	228	232	230

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 74

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	0.9	0.8	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6
2	0.6	0.7	0.7	0.9	1.0	1.1	1.0	1.1	1.0	1.0	0.8	0.6	0.7
3	0.7	0.8	1.0	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.9	0.7	0.6
4	0.7	0.7	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.0	0.9	0.7	0.7
5	0.7	0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.9	0.7	0.7
6	0.6	0.6	0.7	0.9	0.9	0.8	1.1	1.0	...c	...c	0.9	0.8	0.9
7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.7	0.6
8	0.6	0.8	0.9	1.0	...	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.7
9	0.6	0.7	0.8	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	0.7	0.7
10	p0.5e	0.7	0.8	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.8	0.7	0.6
11	0.7	0.7	0.9	0.8	1.1	0.9	1.1	0.9	1.0	0.9	0.9	0.7	0.7
12	0.7	0.7	0.8	1.1	...c	...c	1.1	1.1	1.2	1.0	0.8	0.8	0.6
13	0.7	0.7	0.9	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.8	0.7	0.7
14	0.7	1.0	1.0	1.0	1.0	1.2	1.1	1.0	1.1	1.1	1.0	0.7	0.6
15	0.6	0.7	0.7	0.8	0.8	0.8	1.3	1.0	0.9	0.8	0.8	0.7	0.7
16	0.7	0.7	0.8	1.0	...c	...c	1.3	1.0	1.1	1.0	1.1	0.8	0.6
17	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.1	1.0	0.8	0.8	0.6	p0.5c
18	0.7	0.8	0.7	0.8	0.9	1.0	0.8	1.0	1.0	0.9	0.8	0.6	0.8
19	0.6	0.7	0.8	1.1	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.7	0.7
20	0.6	0.7	0.9	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.8	0.7	0.7
21	0.6	0.7	0.8	1.0	1.1	1.2	1.1	1.0	1.0	0.7	0.7	0.8	0.7
22	p0.5e	0.6	1.0	0.7	1.0	0.9	0.8	0.8	1.0	0.8	0.7	0.7	0.6
23	0.6	0.8	0.8	1.3	0.8	1.1	1.0	1.0	0.8	0.9	0.8	0.7	0.7
24	0.6	0.6	0.8	0.8	0.8	0.8	1.0	1.0	0.9	0.6	0.7	0.8	0.6
25	0.7	0.8	0.8	1.0	1.0	0.9	1.0	1.0	0.9	0.9	0.8	0.7	0.7
26	0.6	0.8	0.8	1.0	0.8	0.9	0.8	1.0	0.9	0.8	0.7	0.7	0.7
27	0.6	0.6	0.6	0.9	1.1	1.1	1.1	1.1	0.8	0.9	0.7	0.6	0.6
28	0.6	...c	...c	0.8	0.9	1.0	1.0	0.8	0.8	0.9	0.8	0.8	0.7
29	0.7	0.7	0.7	0.7	0.8	0.9	0.8	1.0	0.8	0.8	0.8	0.7	0.6
30	0.7	0.7	1.0	0.8	1.0	0.8	0.8	1.0	0.9	0.8	0.9	0.8	0.6
31													
MEAN*	0.7	0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.7	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.1	2.9	3.3	3.5	3.8	3.8	3.8	3.8	3.7	3.6	3.3	2.7	1.6
2	2.5	2.9	3.5	3.7	3.4	3.8	3.8	3.8	3.7	3.5	3.2	2.7	2.0
3	2.3	2.8	3.3	3.5	3.7	3.8	3.9	3.4	3.7	3.3	3.3	2.7	1.9
4	2.0	2.9	3.2	3.5	3.6	3.8	3.7	3.7	3.7	3.4	2.9	2.8	2.0
5	2.2	2.8	3.2	3.5	3.7	3.8	3.8	3.9	3.7	3.4	3.1	2.7	1.9
6	2.2	2.9	3.2	3.4	3.5	3.3	3.5	3.8	p3.6c	p3.3c	3.0	2.6	1.8
7	2.3	2.7	3.3	3.5	3.6	3.8	3.8	3.9	3.7	3.6	3.2	2.7	2.0
8	2.3	2.8	3.2	3.5	3.5	3.7	3.8	3.8	3.7	3.6	3.3	2.7	2.0
9	2.3	2.8	3.3	3.5	3.6	3.6	3.7	3.7	3.6	3.3	3.1	2.5	2.0
10	2.2	2.8	3.2	3.5	3.6	3.9	4.0	3.8	3.8	3.5	3.2	2.7	2.0
11	2.2	2.8	3.3	3.5	3.7	3.8	3.8	3.6	3.4	3.4	3.3	2.7	1.8
12	2.4	2.9	3.3	3.5	p3.6c	p3.7c	3.7	3.7	3.6	3.5	3.2	2.6	2.2
13	2.3	2.9	3.3	3.5	3.7	3.7	3.8	3.6	3.5	3.4	3.2	2.4	1.6
14	2.2	2.8	3.2	3.4	3.7	3.7	3.6	3.6	3.0	3.4	3.1	2.8	2.1
15	2.2	3.0	3.4	3.6	3.7	3.6	3.7	3.4	3.7	3.6	3.2	2.7	2.2
16	2.4	3.0	3.3	3.7	p3.7c	p3.8c	3.8	3.8	3.7	3.6	3.3	2.8	2.2
17	2.4	3.0	3.5	3.7	3.8	3.8	3.7	p3.8a	3.8	3.7	3.3	3.0	2.1
18	2.4	2.9	3.3	3.6	3.8	3.8	3.9	3.9	3.8	3.6	3.3	2.9	2.0
19	2.3	2.9	3.3	3.6	3.7	3.6	3.9	3.9	3.8	3.6	3.3	2.9	2.1
20	2.5	3.0	3.3	3.6	3.8	3.9	3.9	3.9	3.8	3.6	3.3	2.8	1.9
21	2.4	3.0	3.3	3.7	3.8	3.9	3.9	3.9	3.8	3.6	3.3	2.8	1.9
22	2.5	2.9	3.3	3.5	3.7	3.6	3.3	p3.8a	4.4	3.6	3.3	2.9	2.2
23	2.4	3.0	3.3	3.6	3.9	3.9	3.8	3.8	3.7	3.6	3.4	2.9	2.0
24	2.6	2.9	3.3	3.5	3.7	3.8	3.8	3.7	3.5	...a	...a	...a	...a
25	2.4	3.0	3.3	3.6	3.7	3.9	3.9	3.8	3.8	3.7	3.4	2.9	p2.2a
26	2.4	2.9	3.3	3.7	3.7	3.8	4.0	3.9	3.8	3.6	3.3	2.8	2.0
27	2.5	2.9	3.3	3.4	3.6	4.0	3.9	4.0	3.9	3.6	...a	...a	2.2
28	2.4	p2.9c	p3.2c	3.4	3.5	3.9	3.9	3.9	3.8	3.6	3.4	2.9	2.2
29	2.5	3.0	3.3	3.5	3.7	3.6	3.6	3.9	3.8	3.6	3.4	3.0	2.3
30	2.3	2.9	3.2	3.3	3.4	4.0	p3.9a	3.8	4.2	3.8	3.4	2.7	2.3
31													
MEAN*	2.3	2.9	3.3	3.5	3.7	3.8	3.8	3.8	3.7	3.5	3.2	2.8	2.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 75

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1939 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — DECEMBER 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.1	6.7	6.0	5.5	5.2	5.4	5.8	6.7	6.7	6.9	7.4	7.8	8.4	9.0	9.0	9.4	10.3	9.8	9.3	8.2	7.7	6.7	6.6	6.2	7.4
2	6.6	6.2	5.5	5.3	5.4	5.2	6.5	6.2	7.0	7.3	7.5	8.3	8.8	9.1	9.0	8.9	8.3	8.5	8.4	8.0	7.5	6.8	6.1	6.0	7.2
3	5.9	5.9	5.2	5.0	5.0	5.2	5.3	5.8	5.8	6.5	6.7	7.3	7.5	8.1	8.5	9.0	9.0	9.2	8.8	8.7	8.3	7.4	7.0	7.0	7.0
4	7.1	6.2	5.5	5.3	5.1	5.2	5.5	5.8	6.1	6.9	6.2	7.2	7.8	7.7	p7.6c	p7.6c	7.6	7.5	7.7	7.6	6.7	6.7	6.2	6.0	6.6
5	6.0	5.6	5.3	5.2	4.8	5.1	6.0	7.2	8.5	9.3	9.4	10.1	9.9	10.0	9.7	9.7	9.4	9.6	9.9	9.8	8.9	7.3	6.8	6.8	7.9
6	6.7	6.5	5.5	6.2	6.1	6.6	6.7	6.5	6.3	7.2	7.9	8.3	9.1	8.9	8.4	7.5	7.7	7.5	7.7	7.3	7.4	6.4	6.1	6.0	7.1
7	6.1	6.1	5.4	4.5	4.1	4.3	6.2	5.2	4.8	5.3	5.3	5.1	5.0	6.0	6.0	6.2	6.0	5.9	5.8	5.2	4.6	5.1	4.6	4.1	5.3
8	4.0	3.8	3.7	3.5	3.7	3.9	4.6	5.1	5.9	7.7	8.1	8.6	8.7	9.7	9.8	9.4	9.6	9.1	9.5	8.1	8.1	7.3	7.5	7.0	6.9
9	5.9	5.2	5.0	5.4	5.5	5.1	5.3	5.4	6.3	6.3	6.4	6.6	7.2	7.3	6.5	6.8	6.8	6.6	7.0	6.5	6.1	5.5	5.7	5.5	6.1
10	5.6	5.4	5.1	4.5	4.5	4.1	p4.7c	5.3	...a	...a	...a	7.7	8.1	8.6	9.0	8.8	9.2	9.0	8.6	9.1	8.1	7.1	7.2	7.4	...
11	7.4	7.2	6.3	5.3	4.7	4.8	6.4	8.0	8.9	9.5	9.6	9.5	9.5	9.6	9.4	10.0	9.1	9.0	9.0	8.4	7.3	7.3	7.1	7.3	7.9
12	7.0	6.1	5.9	5.5	4.9	4.5	5.1	6.6	7.9	9.0	9.6	9.6	9.7	10.4	10.7	10.8	10.1	10.4	10.2	9.8	9.3	8.0	7.7	7.3	8.2
13	6.6	6.3	5.8	6.0	5.2	5.6	6.6	6.8	p8.0c	9.1	9.4	9.4	9.3	8.8	9.0	9.2	8.9	9.0	8.4	8.0	8.1	7.6	6.7	6.6	7.7
14	6.5	6.6	6.2	5.8	5.4	5.6	7.1	8.2	9.2	9.2	9.8	p10.5c	11.0	11.0	10.5	10.3	10.1	10.2	10.0	9.9	9.1	8.3	7.1	6.4	8.5
15	6.6	6.9	6.4	6.6	...c	...c	...c	...c	...c	...c	10.2	10.6	11.0	10.8	p11.0c	11.2	10.4	9.9	9.9	9.4	p8.8c	8.2	...c	...c	...
16	7.1	p7.2c	p7.3c	7.4	7.6	7.3	6.9	7.5	...c	...c	...c	...c	...c	...c	6.8	6.7	6.7	6.8	6.7	6.7	6.8	6.7	6.7	6.5	...
17	7.0	6.7	6.3	6.3	6.3	6.5	6.2	6.7	6.5	7.7	8.6	9.9	8.9	9.2	9.5	9.2	9.0	9.2	9.6	8.8	8.4	7.7	p7.4c	7.2	7.9
18	6.9	6.6	6.3	6.2	6.2	p6.2c	6.2	6.3	6.6	6.8	7.4	7.4	7.9	7.8	8.1	8.3	8.4	8.2	8.1	7.8	7.7	7.4	7.0	7.2	7.2
19	7.0	6.6	5.9	5.8	5.5	5.8	6.7	7.4	7.2	7.0	7.5	8.2	8.9	9.5	9.5	9.4	9.6	9.0	8.7	8.7	8.3	8.4	8.0	8.3	7.8
20	8.3	7.2	6.1	5.5	5.5	6.0	7.1	7.4	7.9	8.4	9.2	10.1	10.5	10.5	p10.4c	10.3	10.2	9.5	9.5	9.3	9.1	8.6	7.7	7.7	8.4
21	7.7	7.5	6.5	6.0	5.9	6.8	7.2	6.9	7.0	6.9	7.0	7.3	7.9	8.4	8.8	9.5	9.3	8.9	8.7	9.0	8.4	7.5	7.0	6.6	7.6
22	7.1	6.6	6.6	6.0	5.5	5.2	5.5	5.9	6.1	6.3	5.9	6.1	6.3	6.3	6.7	7.0	7.3	7.5	7.8	7.3	7.1	6.5	6.2	6.1	6.4
23	6.4	6.3	6.0	5.8	5.5	4.7	5.2	5.8	6.5	6.8	6.6	6.4	6.7	6.8	7.2	7.0	7.2	6.9	7.2	7.7	6.7	6.4	6.1	6.0	6.4
24	5.5	5.0	5.0	5.2	5.0	4.7	5.3	5.5	...c	...a	...a	7.1	7.1	7.0	7.3	7.2	7.7	7.5	7.7	8.2	8.2	7.6	7.5	7.3	...
25	6.6	6.6	6.5	5.6	5.2	5.2	5.6	6.9	7.1	8.0	7.8	9.0	9.1	10.0	9.3	8.4	8.4	8.4	8.5	9.0	9.0	8.8	8.0	6.8	7.7
26	6.6	6.4	5.9	6.2	6.3	6.3	6.9	p6.9a	7.4	8.0	8.2	8.2	8.4	7.7	7.3	7.5	7.1	7.3	7.0	6.8	7.5	7.4	6.8	6.5	7.1
27	7.7	6.5	5.6	4.7	4.4	4.4	5.9	7.3	9.0	9.4	10.0	9.9	10.5	11.0	10.1	9.8	10.0	9.4	9.0	8.7	7.8	7.2	7.2	6.6	8.0
28	6.3	6.4	6.2	5.8	4.7	4.5	5.0	5.4	5.9	5.6	5.7	5.9	p6.2a	p6.4a	6.6	6.5	6.5	5.9	5.6	5.9	7.0	6.8	6.7	6.5	6.0
29	6.0	3.8	2.9	2.6	2.6	3.3	4.2	4.5	5.0	5.9	6.5	7.1	7.2	6.9	7.1	7.0	8.2	p7.7a	7.2	7.3	7.6	7.3	7.0	7.4	5.9
30	5.9	5.0	4.4	4.1	3.2	3.4	4.6	5.4	6.3	6.3	7.0	8.3	9.4	9.2	8.8	8.8	9.1	8.7	8.3	8.1	8.4	8.0	7.6	7.3	6.9
31	7.4	6.1	5.2	4.9	4.3	4.2	5.1	5.7	6.7	7.1	8.0	8.3	8.3	7.6	8.3	8.7	8.3	8.3	7.3	7.1	7.3	7.1	6.6	6.9	6.9
MEAN*	6.6	6.2	5.7	5.4	5.1	5.2	5.8	6.3	6.9	7.4	7.8	8.2	8.5	8.6	8.6	8.6	8.6	8.4	8.3	8.1	7.8	7.3	6.9	6.7	7.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 76

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1939 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — DECEMBER 1939

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	350	275	260	260	290	275	225	320	340	380	390	360	370	340	380	370	305	290	265	240	250	260	290	260	306
2	310	p310a	310	260	300	265	280	430	360	360	440	360	370	335	350	315	340	310	240	250	245	235	280	310	315
3	315	...a	265	...a	...a	360	380	275	...a	380	400	385	420	375	350	345	325	300	265	245	225	245	275	265	...
4	245	235	240	240	290	330	345	350	410	380	p380a	p380a	380	365	p350c	p340c	335	305	275	240	p260a	275	290	300	314
5	p300a	290	p280a	280	250	250	235	350	290	300	345	p350a	250	310	p310a	p310a	310	300	270	245	240	235	280	330	292
6	290	270	285	265	285	310	320	310	430	400	340	350	320	340	300	310	310	285	275	250	240	230	280	305	304
7	270	250	230	245	285	285	375	430	550	460	485	600	730	470	450	400	380	380	305	265	280	270	270	300	374
8	295	p300a	310	315	285	285	380	410	430	315	330	330	350	330	315	325	300	300	p270a	245	255	275	290	255	312
9	260	270	p280a	p300a	310	290	325	420	390	395	380	500	440	360	490	370	345	340	285	235	235	270	295	300	337
10	...a	...a	...a	295	250	300	340	...a	...a	...a	...a	330	350	360	330	340	310	275	280	275	260	280	...a	...a	...
11	...a	...a	250	245	245	250	240	290	260	300	315	330	350	330	350	300	300	300	250	235	250	265	290	p285a	...
12	p285a	280	265	270	270	260	230	310	310	300	305	315	340	330	310	290	300	290	240	240	230	270	250	240	280
13	245	260	260	280	240	250	295	280	p300c	320	345	320	p340a	350	375	335	...a	...a	...a	...a	250	249	250	285	...
14	p270a	250	p260a	260	250	260	240	285	290	p300a	320	p320c	315	315	320	300	305	285	235	250	230	245	240	...a	...
15	...a	...a	...a	275	...c	...c	...c	...c	...c	...c	320	315	320	330	p310c	295	300	300	280	230	230	240	250	280	...
16	285	300	...a	265	255	250	260	340	...c	...c	...c	...c	...c	...c	400	405	375	350	300	255	255	275	275	290	...
17	p280a	p280a	270	270	265	270	290	310	440	360	p340a	330	340	340	320	335	330	305	260	235	230	230	265	280	299
18	p270a	265	p260a	250	240	255	280	370	380	p375a	370	375	360	400	365	350	325	310	280	p270a	265	270	265	260	309
19	250	240	245	265	285	265	230	285	305	375	p375a	375	370	360	340	340	320	280	270	p260a	255	265	...a	...a	...
20	...a	...a	...a	255	260	250	230	250	300	325	350	330	320	330	p330c	330	320	290	270	250	230	250	265	p260a	...
21	250	255	250	255	300	250	250	265	320	375	400	400	380	380	390	350	335	300	290	275	240	260	250	330	306
22	280	270	280	250	240	290	340	360	400	420	520	460	460	470	...a	...a	350	360	315	275	260	260	290	340	...
23	300	320	300	290	290	275	240	380	390	400	390	450	440	450	390	400	350	350	300	265	260	275	290	255	335
24	p265a	275	310	280	250	300	280	315	...c	...a	...a	...a	420	405	...a	...c	360	...c	280	p270a	260	275	270	260	...
25	p270a	p270a	280	270	265	285	260	290	340	250	330	370	350	320	320	325	290	300	275	260	250	235	250	270	289
26	255	275	270	270	245	...a	...a	...a	...a	345	320	325	370	350	420	360	345	315	245	265	270	...a	...a	...a	...
27	250	255	270	265	260	250	235	265	285	300	285	315	335	310	305	320	310	280	275	255	255	p270a	280	280	280
28	p280a	275	270	p280a	290	310	375	370	380	...a	...a	440	...a	...a	400	355	350	300	260	280	275	275	270	255	...
29	p270a	280	p280a	280	370	300	470	610	500	400	400	370	350	p350a	350	390	295	...a	...a	...a	...a	...a	...a	250	...
30	250	...a	...a	...a	...a	290	380	375	330	330	380	p360a	335	320	p310a	p310a	310	290	280	260	250	260	280	260	...
31	275	280	260	250	290	290	250	350	310	320	325	320	315	370	p340a	310	300	280	260	255	250	250	275	280	292
MEAN*	276	273	271	268	273	279	296	343	362	352	366	371	376	358	354	339	324	306	272	254	250	258	273	281	307

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 77

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1939 DECEMBER 1939

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.7	4.8	5.1	5.3	5.1	5.4	5.4	5.5	5.1	5.0	4.5	...
2	3.9	4.8	...a	5.0	5.0	5.2	5.3	5.2	5.3	4.8	5.0	4.5	...
3	4.0	4.3	...a	5.0	5.2	...a	5.3	5.3	5.1	5.1	5.0	4.5	3.5
4	4.2	4.3	4.6	4.7	...a	...a	5.1	5.1	...c	...c	4.7	4.5	3.6
5	...	5.2	4.9	...a	...a	...a	...a	...a	...a	...a	...a	4.3	3.7
6	3.7	4.3	4.6	5.2	5.0	5.2	5.0	5.3	4.8	5.0	4.8	4.2	3.7
7	4.1	4.1	4.1	4.4	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.1	3.4
8	3.8	4.5	4.8	5.0	5.1	5.2	5.2	5.1	5.1	4.8	4.7	4.4	...
9	3.8	4.2	...a	4.8	4.9	4.8	4.9	5.1	5.1	4.9	4.8	4.5	3.7
10	3.6	...a	...a	...a	...a	5.3	5.2	5.5	5.5	5.2	4.8	...a	...
11	...	4.6	4.8	5.1	5.2	5.5	5.3	5.3	5.2	5.1	4.9	4.5	...
12	...	4.7	5.1	5.2	5.5	5.5	5.5	5.3	5.2	5.2	5.1	4.5	...
13	...	...	...c	5.3	5.2	5.3	...a	5.5	5.3	5.0	...a	...a	...
14	...	...	4.9	...a	...a	...c	5.5	5.5	5.5	5.0	5.1	4.6	...
15	...	...c	...c	...c	5.5	5.6	5.5	...a	...c	5.2	4.9	5.2	5.1
16	4.2	5.4	...c	...c	...c	...c	...c	...c	5.0	5.0	4.7	4.5	4.2
17	3.7	4.6	4.8	5.1	...a	5.3	5.5	5.3	5.2	5.2	5.1	4.8	4.2
18	...	4.5	5.1	...a	5.2	5.2	5.3	5.5	5.1	5.1	4.8	4.5	...
19	...	4.5	4.9	5.5	...a	5.4	5.4	5.6	5.5	5.2	5.1	4.5	4.3
20	...	...	5.3	...a	...a	5.3	5.4	5.5	...c	5.4	...a	4.6	...
21	3.3	4.3	4.7	5.1	5.1	5.0	5.2	5.3	5.2	4.9	4.8	4.5	...
22	3.8	4.4	4.5	4.9	4.9	4.9	4.9	5.0	...a	...a	4.8	4.6	3.7
23	...	4.3	4.7	5.0	4.9	5.1	5.0	5.1	5.1	5.0	4.8	4.6	3.8
24	...	4.3	4.6	...a	...a	...a	5.2	5.0	...a	4.8	4.7	...c	...
25	...	4.4	4.7	5.0	5.2	5.5	5.1	5.2	5.3	5.0	5.0	4.5	...a
26	...	...	...	5.0	4.8	5.2	5.1	5.0	5.2	4.8	4.7	4.6	...
27	...	4.5	4.8	5.0	5.0	...a	5.4	5.3	5.1	5.0	4.7	...a	...
28	3.7	4.1	4.4	...a	...a	4.8	...a	...a	...a	4.7	4.6	4.1	...
29	3.7	4.0	4.2	4.5	4.8	4.9	5.0	...a	5.0	5.0	4.7	...a	...
30	3.7	4.0	4.4	4.7	...a	...a	5.1	...a	...a	5.4	5.0	...a	...
31	...	4.5	4.3	4.9	5.0	...a	...a	...a	...a	4.7	4.6	4.4	3.4
*MEAN	3.8	4.5	4.7	5.0	5.1	5.2	5.2	5.2	5.2	5.0	4.8	4.5	3.9

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	210	200	215	190	220	210	210	220	220	220	230	...
2	250	220	...a	...a	220	200	210	240	230	220	230	230	...
3	280	250	...a	...a	...a	...a	...a	250	225	230	220	240	250
4	250	250	210	...a	...a	...a	...a	...a	...c	...c	225	230	230
5	...	210	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a
6	...a	...a	240	200	200	210	220	210	260	220	225	230	220
7	240	220	230	220	300	...c	250	225	230	210	240	230	260
8	250	240	205	270	220	210	200	200	200	220	230	225	...
9	...	230	...a	...a	...a	225	...a	240	250	230	230	220	250
10	...a	...a	...a	...a	...a	200	200	...a	260	260	220	...a	...
11	...	240	210	200	200	...a	200	220	230	215	220	210	...
12	...	230	...a	220	210	220	...a	...a	215	210	210	200	...
13	...	...	250	...a	...a	...a	...a	210	210	...a	...a	...a	...
14	...	...	230	...a	...a	...c	200	210	210	220	220	230	...
15	...	...c	...c	...c	...a	210	...a	...a	...c	230	220	215	235
16	240	...a	...c	...c	...c	...c	...c	...c	250	215	230	235	240
17	240	230	225	220	...a	200	220	220	220	220	240	230	225
18	...	230	230	...a	...a	230	215	230	...a	...a	...a	...a	...
19	...	250	240	...a	...a	270	210	230	230	230	220	215	250
20	...	...	240	...a	...a	230	225	210	...c	270	...c	...a	...
21	235	230	240	250	200	210	...c	230	230	...c	230	230	...
22	270	270	...a	...a	215	200	215	280	...a	...a	230	235	270
23	...	230	270	250	240	250	250	230	250	...a	240	250	265
24	...	240	250	...a	...a	...a	370	260	...a	...a	...a	...c	...
25	...	230	...a	...a	220	220	...a	...a	250	...a	...a	...a	...a
26	...	...	...	...a	230	...a	...a	...a	230	230	220	230	...
27	...	230	240	230	...a	...a	200	...a	230	230	230	...a	...
28	...a	280	...a	...a	...a	...a	...a	...a	...a	...a	240	230	...
29	240	220	280	...a	220	220	210	...a	220	...a	...a	...a	...
30	250	245	...a	...a	...a	...a	190	...a	...a	...a	220	...a	...
31	...	250	220	290	...a	...a	...a	...a	...a	...a	230	220	230
*MEAN	249	236	234	233	220	219	222	228	231	227	227	227	244

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 78

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1939 DECEMBER 1939

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.6	0.7	0.8	0.8	2.3	1.0	1.0	0.8	0.8	0.7	0.8	0.6	0.7
2	0.7	0.8	1.0	0.9	0.9	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.8
3	0.6	0.7	0.7	1.0	0.9	1.0	1.0	1.0	1.0	1.9	0.9	0.8	0.8
4	0.6	0.6	1.2	0.8	0.8	0.8	0.8	0.9	...c	...c	0.8	0.7	0.7
5	0.6	0.7	0.9	0.9	0.9	1.0	0.8	0.8	0.8	0.8	0.8	0.7	0.6
6	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.8	0.8	0.7	0.7	0.7
7	0.5	0.6	0.7	0.9	0.9	1.0	0.8	0.8	0.9	0.8	0.8	0.8	0.7
8	0.6	0.8	0.8	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.9	0.7	0.6
9	0.7	0.8	0.7	0.9	0.9	1.0	1.0	1.0	0.8	0.8	0.8	0.7	0.7
10	0.8	0.8	0.8	0.8	0.7	0.8	1.0	1.1	0.9	1.0	0.9	0.8	0.7
11	0.6	0.7	0.9	0.9	0.9	0.8	0.8	0.9	1.0	0.8	0.8	0.7	0.8
12	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.9	0.8	0.9	0.7	0.6
13	0.6	0.7	0.9	0.8	0.8	1.0	1.0	1.0	0.8	0.9	0.8	0.7	0.7
14	0.7	0.8	0.8	1.0	1.2	...c	1.1	1.1	1.1	1.1	0.8	0.8	0.7
15	...c	...c	...c	...c	0.9	1.0	1.1	1.1	...c	1.0	0.9	0.8	0.7
16	0.8	1.0	...c	...c	...c	...c	...c	...c	0.9	1.0	1.0	0.9	0.7
17	0.7	0.7	0.8	1.1	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.7
18	0.6	0.7	0.8	1.1	0.8	1.0	1.1	1.2	1.1	0.9	1.0	0.7	0.7
19	0.7	0.8	0.8	1.5	0.8	0.8	1.0	0.9	1.0	0.9	0.8	0.7	0.7
20	0.6	0.6	0.7	0.7	0.8	1.0	0.7	1.0	...c	0.8	1.1	0.8	0.7
21	0.6	0.7	0.8	0.9	1.0	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.7
22	0.6	0.6	0.8	0.8	0.9	1.0	0.8	0.8	1.2	1.1	0.9	0.7	0.7
23	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.8
24	0.7	0.9	1.0	1.3	0.8	0.8	0.8	1.0	1.0	0.8	1.0	...c	0.6
25	0.7	0.7	0.7	0.8	...c	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7
26	p0.5e	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.9	...c	0.7	0.9	0.7
27	p0.5e	0.7	0.9	0.8	0.9	0.9	0.8	0.9	1.0	1.0	0.8	0.8	0.8
28	0.7	0.6	0.8	0.7	0.8	0.9	0.8	1.0	1.0	1.0	0.9	0.7	0.9
29	0.6	0.6	0.6	0.7	0.7	0.9	0.9	1.0	0.8	0.8	0.7	0.8	0.8
30	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.7
31	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.7
* MEAN	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.4	2.9	3.3	3.6	3.9	3.8	3.8	3.8	3.5	3.3	3.3	2.9	2.2
2	2.3	2.8	3.2	3.5	3.6	3.6	3.8	3.8	3.6	3.6	3.3	2.7	2.3
3	2.3	3.0	3.3	3.6	3.8	3.8	3.7	3.4	3.3	3.3	3.3	2.9	2.4
4	2.4	2.9	3.4	3.6	3.7	3.4	3.7	3.7	p3.5c	p3.4c	3.3	2.9	2.3
5	2.3	3.0	3.3	3.6	3.7	3.7	3.6	3.6	3.1	...a	...a	...a	...a
6	2.3	2.8	3.2	3.4	3.5	3.8	3.8	3.7	3.7	3.5	3.3	2.8	2.2
7	2.3	2.8	3.1	3.6	3.6	3.6	3.6	3.6	3.7	3.6	3.1	2.8	2.2
8	2.3	2.7	3.0	3.3	3.3	3.7	3.8	3.7	3.4	3.6	3.1	3.0	p2.3e
9	2.0	2.8	3.0	3.2	3.5	3.7	3.7	3.8	3.7	3.5	3.3	2.8	2.2
10	2.2	2.7	3.0	3.3	3.5	3.6	3.9	3.9	3.8	3.6	3.3	2.9	2.2
11	2.4	2.9	3.0	3.3	3.3	3.8	3.8	3.8	3.7	3.6	3.3	2.8	2.2
12	2.3	2.9	3.3	3.6	3.7	3.8	3.7	3.3	3.1	3.7	3.4	3.2	2.5
13	2.4	3.0	3.3	3.5	3.7	3.7	3.7	3.5	2.9	p2.5a	2.1	...a	...a
14	2.4	3.0	3.3	3.6	3.8	p3.6c	3.5	3.7	3.5	3.6	3.5	3.2	2.4
15	...c	...c	...c	...c	3.4	3.9	3.9	3.8	...c	4.1	3.6	2.8	2.1
16	2.4	2.8	...c	...c	...c	...c	...c	...c	3.8	3.7	3.4	3.0	2.3
17	2.4	2.8	3.3	3.6	3.8	3.8	3.9	3.9	3.8	3.6	3.3	3.0	2.4
18	2.1	2.8	3.3	3.6	3.7	3.9	3.9	4.0	3.9	3.7	3.4	3.0	2.1
19	2.4	2.9	3.3	3.6	3.6	3.5	3.9	3.9	3.7	3.5	3.4	3.0	2.1
20	2.4	2.8	3.3	3.5	3.6	3.7	4.2	3.9	p3.8c	3.7	3.5	2.9	2.1
21	2.4	2.9	3.3	3.5	3.7	3.8	3.9	4.0	3.8	3.6	3.4	3.0	2.2
22	2.2	2.7	3.2	3.4	3.6	3.8	3.9	3.7	3.6	3.3	3.0	3.0	2.4
23	2.1	2.8	3.2	3.5	3.6	3.8	3.6	4.0	3.7	3.6	3.3	2.9	2.3
24	2.2	2.7	3.1	3.4	3.7	3.7	3.8	3.8	3.7	3.5	3.3	p2.9c	2.4
25	2.2	2.8	3.1	3.5	3.8	3.7	3.8	3.8	3.7	3.5	3.3	2.9	2.2
26	2.3	2.7	3.2	3.3	3.3	3.6	3.5	3.8	3.8	3.6	3.4	3.1	2.4
27	2.3	2.7	3.2	3.3	3.5	3.6	3.6	3.6	3.5	3.4	3.3	3.0	2.1
28	2.2	2.7	3.2	3.4	3.5	3.6	3.6	3.7	3.6	3.5	3.3	2.8	2.0
29	2.3	2.6	3.1	3.3	3.6	3.7	3.5	3.7	3.7	3.5	3.3	2.9	...a
30	2.3	2.7	3.1	3.4	3.5	3.5	3.4	3.7	3.6	3.3	3.1	2.6	1.5
31	2.3	2.8	3.1	3.4	3.6	3.7	3.7	3.7	3.4	3.3	3.0	2.8	2.4
* MEAN	2.3	2.8	3.2	3.5	3.6	3.7	3.7	3.7	3.6	3.5	3.3	2.9	2.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 79

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1940

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	7.2	6.0	5.0	3.7	3.2	3.6	5.2	6.2	6.1	6.5	6.9	7.1	7.2	7.7	8.2	p7.8a	7.5	7.1	6.2	6.1	6.7	6.8	6.2	5.8	6.2
2	5.5	5.3	4.6	3.5	3.0	3.2	4.9	5.2	5.9	6.5	6.2	5.9	7.1	7.7	7.9	7.9	7.4	7.4	7.0	7.3	6.8	6.7	7.4	6.7	6.1
3	5.8	4.7	4.3	3.6	3.3	3.4	5.0	6.7	7.9	9.0	10.0	10.1	9.8	10.2	10.2	9.8	9.8	9.6	9.0	8.2	8.4	8.6	7.9	7.7	7.6
4	5.0	3.9	3.2	3.1	2.4	2.5	3.4	4.3	5.3	5.5	6.2	6.5	6.2	6.7	7.4	6.9	6.8	6.8	6.6	6.8	7.6	7.7	8.0	7.5	5.7
5	7.0	5.8	5.7	5.0	4.4	4.0	5.2	6.7	7.7	8.0	8.2	7.0	7.3	8.0	8.3	8.4	7.4	6.6	6.4	6.3	6.9	6.9	6.7	6.4	6.7
6	5.9	5.7	5.3	4.8	4.6	4.6	5.7	6.7	7.5	7.8	8.3	8.5	8.7	9.1	10.4	10.5	9.3	8.8	8.3	7.5	7.4	7.1	7.2	7.0	7.4
7	6.8	6.1	5.2	4.9	4.7	4.5	5.6	6.1	6.6	6.8	7.6	8.5	9.2	9.6	9.1	8.1	7.7	7.7	8.3	8.6	7.6	7.2	6.8	6.2	7.0
8	6.5	6.3	5.2	4.4	4.2	3.9	5.4	7.0	8.1	7.5	8.2	8.0	8.1	8.4	...c	...c	...c	8.1	7.0	7.0	6.5	6.4	6.2	6.2	...
9	6.3	6.0	5.4	4.6	4.3	4.3	5.5	7.0	7.8	8.8	9.0	8.4	8.8	9.0	9.3	8.7	8.0	7.5	7.0	7.1	7.2	7.2	7.3	8.0	7.2
10	7.2	5.9	5.3	3.5	3.1	3.6	5.2	7.0	7.5	8.0	8.3	8.5	9.5	9.8	9.7	9.3	8.9	8.1	7.5	7.0	7.0	6.6	6.7	5.8	7.0
11	5.5	5.3	5.4	4.9	4.8	5.3	5.2	5.5	5.5	5.6	6.1	6.5	6.6	6.1	6.2	6.2	5.7	5.5	5.9	5.7	5.7	5.5	5.4	5.3	5.6
12	4.9	4.6	4.2	3.9	3.5	3.3	5.0	5.5	5.3	5.7	6.8	7.5	8.3	8.7	8.9	8.1	7.7	6.8	6.3	6.5	6.5	6.3	5.6	5.6	6.1
13	5.6	4.7	3.6	3.4	3.3	3.2	4.1	4.8	5.7	5.9	5.9	6.7	6.5	7.0	7.3	7.6	7.5	7.3	6.5	6.0	5.9	6.0	6.0	5.7	5.7
14	5.3	4.3	3.5	3.2	3.1	3.5	5.3	6.6	7.6	8.2	9.0	9.3	9.8	10.5	10.2	9.5	8.4	7.4	6.8	6.5	6.8	6.4	6.3	6.7	6.8
15	6.4	6.1	5.5	4.5	4.0	4.0	4.8	5.8	6.4	6.9	7.1	8.1	9.3	10.6	10.0	8.3	7.3	6.4	6.3	6.2	6.7	6.5	6.3	6.2	6.7
16	6.0	5.4	4.8	4.7	4.7	4.3	5.5	6.4	7.5	8.5	9.0	9.3	10.1	11.3	10.8	9.3	8.7	7.8	6.8	6.9	7.3	7.5	7.5	7.4	7.4
17	6.9	6.0	5.0	4.3	4.1	4.1	4.7	5.2	5.7	6.0	7.0	7.8	8.0	9.5	9.7	8.1	8.4	7.1	6.6	5.8	5.9	6.4	6.2	6.0	6.4
18	6.1	6.3	4.6	4.3	4.2	3.7	4.5	5.2	6.8	7.2	8.0	8.2	8.3	8.2	8.0	7.5	6.5	7.0	7.0	7.0	7.3	7.1	7.4	5.9	6.5
19	5.3	4.4	3.6	3.8	4.0	3.9	3.7	5.1	6.0	6.4	7.0	7.1	7.8	8.3	7.8	7.0	6.7	5.9	6.1	6.1	6.8	6.6	6.7	6.5	5.9
20	6.3	5.5	4.3	3.6	3.4	3.2	4.2	5.3	5.7	6.3	6.6	6.1	6.5	6.6	7.4	7.2	6.8	6.2	5.9	6.3	7.2	7.0	6.7	6.4	5.9
21	6.4	5.9	5.0	3.8	3.3	3.2	4.6	5.8	6.4	6.5	7.4	8.0	8.0	8.3	8.5	8.1	7.2	6.8	6.2	6.2	7.0	7.0	6.7	7.0	6.4
22	6.2	5.5	5.2	4.8	4.4	3.9	5.1	6.5	8.1	8.4	9.3	9.5	9.6	9.3	9.5	9.9	8.5	7.5	6.8	7.4	7.7	7.0	6.9	6.8	7.2
23	7.1	5.5	3.8	3.5	3.3	3.4	5.0	7.2	7.1	8.8	9.0	9.1	8.8	9.0	8.8	8.3	7.9	7.5	7.0	7.0	7.3	6.9	6.5	6.5	6.8
24	6.3	5.5	4.4	3.2	3.0	2.8	4.5	6.0	6.7	6.9	7.0	7.4	8.6	9.2	9.2	8.8	7.8	7.0	6.0	5.7	6.4	6.4	6.0	5.6	6.3
25	5.4	4.7	4.1	3.4	3.0	2.9	3.6	4.7	5.4	6.4	6.6	7.2	6.6	7.1	7.0	7.1	6.0	6.4	5.9	6.0	6.3	6.2	6.0	5.5	5.6
26	5.4	4.4	3.9	3.3	3.2	2.7	3.6	4.4	5.8	5.4	5.4	5.9	6.2	6.6	6.7	6.6	6.6	6.5	6.1	6.0	6.1	5.8	5.7	6.1	5.4
27	5.4	5.1	4.6	3.8	2.9	2.8	4.5	5.9	6.5	7.1	7.4	7.7	8.1	7.9	7.7	7.5	7.3	7.3	6.6	6.3	6.7	6.4	6.1	5.6	6.1
28	5.8	5.7	5.5	5.2	4.8	3.9	5.1	6.2	6.9	7.2	8.0	8.6	9.0	8.5	8.5	8.0	7.1	7.8	7.0	6.1	6.2	5.6	5.4	5.2	6.6
29	5.1	4.7	4.5	4.2	3.8	3.6	4.7	5.6	6.5	7.0	7.3	7.9	8.5	8.9	9.1	8.6	7.5	7.0	6.8	6.5	6.6	6.1	6.3	6.2	6.4
30	6.3	6.0	5.3	4.7	4.5	4.1	4.1	4.4	4.6	5.7	6.1	6.0	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
31	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.0	7.6	8.4	7.6	7.5	7.8	7.4	6.7	6.4	6.0	...
*MEAN	6.0	5.4	4.7	4.0	3.8	3.6	4.8	5.8	6.6	7.0	7.5	7.8	8.2	8.5	8.5	8.2	7.6	7.2	6.8	6.7	6.9	6.7	6.6	6.3	6.5

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 80

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JANUARY 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	225	260	240	280	270	245	325	370	395	310	340	375	390	p380a	p360a	340	290	295	260	260	290	255	265	303
2	250	260	260	280	350	350	310	330	425	340	410	390	360	345	330	320	325	295	275	220	235	265	315	310	315
3	260	275	280	270	290	270	265	270	310	325	315	300	320	330	300	300	290	280	245	240	250	260	250	255	281
4	320	340	360	310	370	360	290	p355	425	450	415	315	430	395	315	p315a	310	315	280	275	265	285	280	260	335
5	260	270	260	265	290	300	310	305	320	340	300	400	p375	350	370	340	300	p295a	290	260	260	270	255	260	302
6	265	260	250	255	270	285	285	310	290	315	310	340	340	350	310	300	280	270	245	240	250	265	270	265	284
7	260	250	255	270	270	290	270	290	290	400	330	300	340	300	300	300	290	270	290	290	250	260	270	270	288
8	270	245	235	255	265	280	300	300	285	340	315	320	370	365	...c	...c	...c	280	265	245	200	285	255	280	...
9	260	240	255	260	250	280	240	290	280	290	340	330	340	320	310	305	305	295	240	290	270	270	275	280	284
10	240	270	240	230	p265a	300	240	280	280	290	305	320	330	315	300	310	270	260	260	240	250	290	285	305	278
11	280	p270a	260	290	310	265	335	410	435	470	450	430	390	420	415	385	400	375	300	255	255	275	300	250	343
12	260	...a	...a	...a	...a	340	285	350	420	440	360	370	360	315	320	330	305	295	270	270	270	255	280	270	...
13	240	200	250	275	270	310	240	410	360	310	440	350	385	380	350	310	315	285	220	235	260	275	265	250	299
14	225	240	265	270	300	270	220	235	285	300	305	320	325	310	290	300	295	270	280	300	230	270	310	280	279
15	260	240	230	210	250	270	225	310	360	370	365	380	340	310	275	290	285	270	230	255	255	270	260	255	282
16	230	250	250	270	250	235	235	300	310	300	300	315	340	300	275	315	300	290	235	260	255	240	290	245	275
17	235	250	265	270	280	290	240	225	420	425	390	350	405	320	300	340	295	310	270	250	280	285	290	400	308
18	315	255	285	300	255	270	260	p305a	350	300	330	340	325	330	310	320	320	290	235	260	250	255	250	270	291
19	280	300	330	330	275	240	220	265	375	375	385	415	350	325	325	325	330	p330a	325	p335a	350	290	270	270	317
20	250	235	255	260	270	300	250	250	390	360	345	450	395	400	350	300	300	300	225	p240a	250	250	270	265	298
21	245	240	225	...a	...a	285	270	300	340	375	345	355	360	340	310	310	315	300	...a	275	280	270	270	270	...
22	260	245	280	260	260	250	240	295	270	285	340	290	300	340	310	285	260	275	225	255	240	240	270	255	272
23	230	p230c	230	280	280	280	265	250	325	260	355	300	310	335	300	300	300	290	250	270	230	245	255	280	277
24	230	220	320	250	250	280	250	260	280	335	360	375	340	345	290	300	290	280	255	255	270	270	280	260	285
25	250	240	250	280	285	350	530	450	430	345	345	300	400	350	320	300	330	275	240	260	240	265	280	260	316
26	270	220	260	280	265	290	270	430	400	375	470	370	365	320	325	315	315	285	230	245	245	270	280	260	306
27	250	235	250	240	245	280	245	305	310	p310a	310	325	320	320	320	320	320	280	230	250	265	270	280	280	282
28	...a	280	285	270	250	230	235	p250a	270	320	p315a	310	320	310	300	310	295	270	250	240	265	235	265	270	...
29	...a	260	245	230	250	245	240	260	300	295	355	350	320	300	290	285	300	290	260	260	230	255	275	275	...
30	255	240	240	265	265	290	270	260	490	650	365	440	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
31	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...a	310	290	290	280	260	...a	310	...a	...a	...
MEAN*	258	251	263	267	275	285	269	306	346	356	353	350	353	339	318	314	306	290	258	260	256	268	274	273	295

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 81

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1940 JANUARY 1940

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.6	4.7	p4.8a	4.9	p4.8a	4.8	...a	...a	...a	...a	...a	...
2	3.6	4.0	4.7	4.8	4.8	4.7	4.8	4.8	4.7	4.7	5.1	4.3	...
3	...	4.2	4.6	4.8	4.9	5.0	4.7	5.2	4.9	4.8	4.3	4.4	3.6
4	...	3.9	4.3	4.6	4.8	5.0	5.0	5.2	5.0	...a	...a	4.5	...a
5	3.7	4.4	5.1	5.5	p5.4a	5.3	5.4	5.0	...a	...a	4.6	p4.4a	4.1
6	3.7	4.5	4.6	5.0	4.9	5.2	5.1	5.1	5.0	5.0	4.5	4.1	3.6
7	...	4.3	4.6	4.9	4.9	5.0	5.0	4.9	4.8	4.8	4.6	...	...
8	3.6	4.2	4.5	4.9	5.2	5.0	5.1	5.0	...c	...c	...c	4.4	3.8
9	...	4.2	4.5	4.9	4.9	5.5	5.1	5.1	4.9	4.5	4.5	4.3	...
10	...	4.3	4.7	4.6	4.8	4.8	5.0	5.0	5.1	5.0	4.5	4.3	3.6
11	3.3	4.0	4.4	4.4	4.5	4.7	4.7	4.7	4.8	4.6	4.5	4.5	3.8
12	3.4	4.2	4.8	4.7	4.8	5.0	5.0	4.8	5.0	4.6	4.7	4.3	...
13	...	3.7	4.2	4.5	4.7	4.8	4.9	4.9	5.0	4.8	4.7	4.4	...
14	...	...	...	...	5.0	5.1	5.0	5.2	5.1	4.8	4.6	4.3	3.9
15	...	4.2	4.5	4.8	5.0	5.0	5.0	5.0	4.8	4.9	4.6	4.1	...
16	...	4.5	5.0	5.0	5.1	5.2	5.4	5.1	5.0	4.8	4.7	4.4	...
17	...	...	4.7	4.8	5.0	5.1	5.1	5.1	5.1	4.8	4.7	4.8	...
18	...	...	4.9	4.7	4.9	5.0	4.9	5.2	5.0	4.9	4.8	4.2	...
19	...	...	4.4	4.8	4.8	5.0	5.0	5.0	4.9	4.7	4.4	...a	...
20	...	4.1	4.3	4.6	4.8	5.0	5.0	5.0	4.9	4.8	4.6	4.3	...
21	...	4.2	4.6	5.0	4.9	4.8	4.8	5.2	5.0	4.9	4.7	4.3	...
22	...	4.5	4.5	4.6	5.1	5.1	4.9	5.3	5.0	4.8	4.7	4.3	...
23	...	4.1	4.8	5.5	5.4	4.7	5.1	5.0	5.0	5.1	4.6	4.4	...
24	...	4.0	4.8	4.6	4.9	4.8	4.9	5.0	4.9	4.8	4.5	4.2	3.3
25	3.0	3.7	4.2	4.5	4.8	5.0	4.9	5.0	5.0	4.8	4.8	4.2	...
26	...	3.8	4.2	4.4	4.6	4.7	4.8	4.8	4.7	4.7	4.6	4.1	...
27	...	4.2	4.5	p4.6a	4.8	4.9	4.9	5.0	4.8	4.7	4.7	4.2	...
28	...	...	4.5	4.6	...a	...a	...a	4.8	5.0	4.7	4.6	4.2	3.5
29	...	3.8	4.6	4.7	5.3	4.9	5.0	4.7	4.9	4.8	4.5	4.1	3.6
30	...	3.0	4.2	4.3	4.4	...a	...	...	...	...	...	...	...
31	...	...	...	...	...	...	...	...	...a	4.6	4.6	4.4	4.4
MEAN*	3.5	4.1	4.6	4.8	4.9	5.0	5.0	5.0	4.9	4.8	4.6	4.3	3.8

MINIMUM VIRTUAL HEIGHT OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	230	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
2	240	250	270	300	...a	...a	...a	...a	...a	...a	220	260	...
3	...	240	225	215	200	195	185	220	240	200	205	220	225
4	...	280	...a	...a	225	...a	...a	...a	...a	...a	...a	240	...
5	250	215	230	...a	...a	...	...	...a	...a	...a	235	...a	225
6	240	230	210	220	220	190	180	220	220	230	220	210	225
7	...	230	200	210	195	200	195	240	235	200	240	...	...
8	240	240	200	265	230	205	205	260	...c	...c	...c	235	230
9	...	...a	215	225	...a	240	...a	245	200	220	220	...a	...
10	...	220	230	215	185	...a	200	...a	230	220	200	220	225
11	260	235	220	200	200	200	190	200	220	225	230	230	250
12	250	200	220	200	185	210	...a	220	195	...a	260	...a	...
13	...	250	230	220	190	...a	215	200	210	195	200	220	...
14	...	...	...	...a	...a	...a	220	...a	...a	190	210	225	235
15	...	225	220	200	190	200	200	200	210	205	215	...	...
16	...	220	230	220	...a	200	185	210	190	200	210	210	...
17	...	...	230	200	200	220	200	210	230	210	200	225	...
18	...	...	...a	200	200	195	190	200	215	210	215	220	...
19	...	...	225	225	245	220	190	200	220	190	210	...a	...
20	...	280	210	195	210	220	190	250	240	...a	...a	...a	...
21	...	...a	...a	270	210	190	210	230	195	190	200	...a	...
22	...	220	210	200	195	225	190	230	215	220	215	200	...
23	...	240	200	190	235	180	180	200	200	220	215	230	...
24	...	220	200	200	220	200	...a	270	225	210	195	215	235
25	255	240	215	200	200	200	...a	240	200	230	240	220	...
26	...	225	225	...a	...a	...a	195	190	200	205	225	...a	...
27	...	235	...a	...a	220	...a	...a	210	200	200	220	230	...
28	...	...	225	230	...a	...a	...a	195	220	200	200	240	240
29	...	225	220	255	260	240	215	225	195	215	225	190	240
30	...	245	225	235	210	...a	...c	...c	...c	...c	...c	...c	...c
31	...	...c	...c	...c	...c	...c	...c	...c	...a	...a	190	240	240
MEAN*	248	235	220	220	210	207	197	220	213	208	216	224	234

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 82

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1940 JANUARY 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.8	0.8	0.9	1.0	0.7	0.7	0.8	0.8	1.0	1.1	1.0	0.7	0.8	2.2	2.7	3.1	3.4	3.5	3.7	3.6	3.5	3.3	3.1	2.7	2.2	1.6
2	0.9	0.8	1.3	0.9	0.8	1.0	1.0	0.8	0.7	0.7	0.7	0.6	0.6	2.2	2.7	3.4	3.3	3.7	3.6	3.6	3.7	3.6	3.5	3.2	2.4	2.0
3	0.6	0.7	0.8	0.7	0.7	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.6	2.1	2.8	2.8	3.5	3.5	3.7	3.6	3.6	3.6	3.4	3.4	2.9	2.4
4	p0.5e	0.7	0.7	0.9	1.0	1.2	1.2	2.1	1.0	0.9	1.0	0.8	0.9	2.4	2.8	3.1	3.5	3.6	3.8	3.8	3.7	3.6	3.7	3.3	2.7	p2.2a
5	0.6	0.8	0.7	1.0	0.8	1.0	1.0	2.4	1.0	1.0	0.9	0.8	0.6	2.4	2.9	3.3	3.6	3.7	3.8	4.0	4.0	3.9	3.6	3.4	2.9	2.4
6	0.6	0.7	1.0	1.9	1.2	1.0	1.0	1.1	1.0	1.0	0.8	0.7	0.6	2.3	2.8	3.2	3.7	3.7	3.8	3.9	3.8	3.8	3.6	3.4	2.8	2.0
7	0.7	0.7	0.9	1.1	1.0	1.0	0.9	1.0	2.3	1.0	0.8	0.9	0.8	2.0	2.5	3.0	3.4	3.5	3.7	3.8	3.6	3.8	3.6	3.4	3.2	2.5
8	0.7	0.8	0.8	1.0	0.8	1.0	1.0	0.8	...c	...c	...c	0.8	0.7	2.2	2.9	3.3	3.6	3.6	3.4	3.8	3.5	...c	...c	...c	3.0	2.4
9	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	2.1	2.8	3.2	3.5	3.7	3.7	3.7	3.2	3.6	3.3	3.5	2.2	1.4
10	0.7	0.7	0.7	0.8	0.8	1.0	1.0	1.0	0.8	0.7	0.8	0.7	0.6	2.3	2.8	3.2	3.5	3.6	3.7	3.7	3.4	3.2	3.5	3.3	3.0	p2.3a
11	p0.5e	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	1.0	0.7	0.6	2.2	2.8	3.2	3.4	3.6	3.6	3.7	3.6	3.6	3.4	3.4	3.0	2.5
12	0.6	0.6	0.9	0.8	0.8	1.0	0.9	0.8	0.8	0.7	0.6	0.7	0.6	2.2	2.8	3.1	3.4	3.6	3.7	3.7	3.6	3.7	3.2	3.2	3.0	2.3
13	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.6	2.1	2.7	3.0	3.3	3.6	3.3	3.8	3.7	3.6	3.5	3.3	3.0	2.5
14	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.7	2.4	2.7	3.1	3.4	3.5	3.6	3.6	3.5	3.4	p3.4a	3.5	3.0	2.4
15	0.6	0.7	0.7	1.0	0.9	0.7	1.0	0.8	0.8	0.8	0.8	0.7	0.6	2.1	2.7	3.1	3.5	3.5	3.7	3.7	3.7	3.2	3.7	3.4	3.1	2.5
16	0.6	0.7	0.7	0.6	0.8	0.8	0.8	1.0	0.9	0.8	0.8	0.7	0.6	2.4	2.9	3.5	3.3	3.3	3.8	3.9	3.8	3.6	3.7	3.4	3.0	2.5
17	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.6	2.0	2.7	3.1	3.5	3.6	3.7	3.6	3.6	p3.6a	3.5	3.4	3.0	2.4
18	...e	0.6	0.6	0.7	0.6	0.9	0.7	0.9	0.7	0.8	0.8	0.7	0.8	2.1	2.7	3.1	3.4	3.6	3.6	3.7	3.4	3.4	3.5	3.3	3.0	2.3
19	...e	...e	0.7	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.7	0.6	p0.5e	1.9	2.6	3.1	3.5	3.5	3.6	3.6	3.4	3.7	3.6	...a	...a	...a
20	...e	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.6	0.6	0.6	1.9	p2.6a	3.1	3.5	3.6	3.7	3.7	3.8	3.7	3.5	3.2	2.9	2.3
21	0.7	0.7	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.7	0.5	1.7	2.5	3.3	3.5	3.6	3.4	3.3	3.6	3.5	3.6	3.6	...a	...a
22	0.7	0.6	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.7	0.6	0.6	1.5	2.7	3.0	3.5	3.7	3.7	3.8	3.8	3.7	3.4	3.1	2.8	2.2
23	...e	...e	0.7	0.8	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.7	1.8	2.5	3.0	3.2	3.6	3.7	3.8	3.6	3.6	3.5	3.2	2.8	2.0
24	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.6	1.9	2.5	3.2	3.2	3.6	3.7	p3.6a	3.7	3.6	3.4	3.4	3.0	2.4
25	0.6	0.6	0.7	0.8	0.9	0.8	0.8	0.9	1.0	1.0	0.7	0.8	0.6	2.1	2.7	3.0	3.3	3.3	3.5	p3.6a	3.7	3.7	3.6	3.4	3.0	2.4
26	0.6	0.7	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	1.9	2.5	3.0	3.3	3.2	p3.4a	p3.6a	3.7	3.7	3.5	3.3	p3.0a	2.4
27	...e	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	2.0	2.6	3.1	3.3	3.6	3.8	3.7	3.7	3.4	3.5	3.4	3.0	2.3
28	...e	0.6	0.6	0.8	1.2	1.1	1.3	0.8	0.8	0.7	0.6	0.6	0.5	1.6	2.6	3.0	3.3	3.3	3.4	3.2	3.3	3.7	3.6	3.3	2.9	2.3
29	0.6	0.7	0.7	1.0	0.9	0.9	0.9	1.0	0.9	0.8	0.7	0.6	0.6	1.9	2.6	3.4	3.4	3.7	3.7	3.8	3.8	3.8	3.7	3.3	3.0	2.4
30	0.7	0.6	0.7	0.7	0.8	0.8	...c	...c	...c	...c	...c	...c	...c	2.0	2.4	3.0	3.3	3.5	3.3	...c	...c	...c	...c	...c	...c	...c
31	...c	...c	...c	...c	...c	...c	...c	...c	0.8	0.8	0.8	0.7	0.6	...c	...c	...c	...c	...c	...c	...c	...c	3.6	3.3	3.3	2.9	2.3
* MEAN	0.6	0.7	0.8	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.7	0.6	2.1	2.7	3.1	3.4	3.6	3.6	3.7	3.6	3.6	3.5	3.3	2.9	2.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 83

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1940 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — FEBRUARY 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.0	4.5	4.3	4.5	3.9	3.2	4.6	5.9	6.9	7.1	8.1	9.1	8.4	9.0	9.2	8.5	7.6	7.0	7.7	7.7	6.4	5.2	4.5	4.6	6.4
2	4.7	4.2	3.5	3.2	3.3	3.2	3.8	4.6	4.3	4.3	4.5	5.4	5.8	5.7	6.1	5.9	5.8	5.6	5.8	5.3	5.7	5.5	5.3	5.3	4.9
3	4.8	4.5	4.4	3.9	3.7	3.1	4.2	4.9	5.5	6.0	6.4	7.2	8.2	7.7	7.8	7.5	7.2	6.8	6.1	6.4	6.9	6.3	6.0	5.7	5.9
4	5.7	5.1	4.4	4.1	3.9	3.6	3.9	4.6	5.4	6.2	6.8	7.0	7.2	6.9	7.1	7.8	7.5	7.4	7.7	7.2	6.9	5.8	5.1	5.2	5.9
5	5.0	4.7	4.7	4.5	4.3	3.8	5.1	6.4	7.1	7.6	8.5	8.3	9.0	9.1	p9.0c	p8.8c	8.7	8.4	8.6	7.7	7.5	6.8	5.6	5.7	6.9
6	5.4	5.4	5.4	4.3	3.9	3.7	4.7	5.5	6.4	7.1	6.6	7.2	7.5	8.3	9.1	8.6	8.0	7.6	7.7	6.9	6.5	5.8	5.5	5.4	6.4
7	5.2	5.1	4.6	4.1	4.0	4.0	4.2	5.0	5.0	5.2	6.0	5.8	7.0	6.8	6.3	6.8	6.8	6.6	6.6	6.4	6.3	p5.5c	p5.0c	4.7	5.5
8	4.7	4.6	4.6	4.8	4.6	3.8	4.3	5.3	5.8	6.9	7.2	7.6	8.0	8.7	8.0	8.6	8.8	8.7	8.7	7.5	6.7	5.7	5.1	4.7	6.4
9	4.7	4.7	4.2	3.9	3.7	3.6	5.4	6.7	7.8	9.0	9.4	8.8	9.3	9.5	9.6	9.3	8.6	8.0	7.5	7.4	7.1	5.4	4.5	4.3	6.8
10	4.1	4.0	3.8	3.7	3.6	3.6	4.7	5.7	6.6	8.0	9.6	9.5	8.9	8.9	9.3	8.9	8.4	8.4	8.5	8.4	7.6	6.8	6.4	6.0	6.8
11	6.0	5.8	5.6	4.3	4.1	3.6	5.4	6.3	7.5	8.5	9.3	10.0	9.5	9.1	9.2	9.3	9.5	9.2	8.9	9.0	8.2	6.8	6.5	5.9	7.4
12	5.7	6.1	5.7	4.7	4.0	3.8	4.5	5.4	5.7	5.8	5.8	6.1	6.0	5.5	6.0	6.5	6.0	6.1	6.0	5.8	5.1	4.5	5.1	5.2	5.5
13	4.6	4.3	5.0	3.9	3.3	2.6	4.2	6.1	7.4	8.6	9.0	9.1	9.6	9.1	9.0	9.3	9.4	8.7	8.1	7.5	7.5	6.3	5.9	5.7	6.8
14	5.5	6.0	5.5	4.6	3.7	3.1	3.9	5.2	6.0	6.6	6.8	8.1	8.3	8.8	9.2	8.9	9.0	8.8	8.5	8.3	7.6	7.0	7.0	7.0	6.8
15	7.0	6.6	5.1	4.5	4.3	4.3	5.0	6.2	6.9	7.3	8.0	8.8	9.1	9.1	9.2	9.4	8.9	8.8	8.6	8.0	7.3	6.7	6.6	6.2	7.2
16	6.5	6.6	5.2	4.5	3.4	3.3	4.2	5.5	6.1	6.6	7.1	8.1	8.7	8.7	9.2	9.1	9.0	8.2	8.0	8.0	7.5	6.7	6.3	6.1	6.8
17	6.0	5.5	5.4	5.3	5.0	4.7	5.1	6.1	6.9	7.9	8.6	8.9	8.6	8.4	8.7	8.9	9.0	8.5	8.5	8.2	7.6	7.2	6.6	p6.2c	7.2
18	p5.8c	5.6	5.8	5.5	4.7	4.3	4.8	6.1	6.7	7.7	7.9	8.1	8.6	8.6	8.3	8.5	8.5	8.5	8.4	7.8	7.2	6.6	6.2	5.9	6.9
19	5.7	5.8	5.4	4.6	4.5	4.8	5.4	6.9	7.3	8.5	8.5	8.5	8.3	8.3	8.8	8.9	8.4	8.0	7.7	7.7	7.3	6.5	6.4	6.2	7.0
20	6.0	5.5	4.9	4.8	4.9	4.9	5.1	5.7	6.4	6.8	7.0	8.0	8.3	9.5	9.5	9.3	8.3	8.6	8.0	8.2	7.4	6.9	6.2	5.5	6.9
21	5.4	5.5	5.7	5.6	4.8	4.5	4.5	4.9	5.2	5.6	6.4	7.1	7.3	7.8	7.7	7.1	6.5	6.0	5.8	5.7	6.0	6.1	6.0	6.2	6.0
22	6.0	5.0	4.3	4.3	4.2	3.8	4.4	5.4	6.0	6.6	6.1	6.3	6.0	6.6	6.6	6.6	6.4	6.2	6.0	5.8	5.5	4.7	4.3	4.3	5.5
23	4.1	4.3	4.0	3.5	3.6	3.7	4.3	5.3	5.5	5.5	5.6	5.6	6.0	5.5	5.5	5.6	5.4	5.3	5.5	5.0	4.7	4.3	3.8	3.8	4.8
24	3.9	4.0	4.1	3.6	3.1	3.6	4.1	6.4	8.2	8.6	7.2	8.4	8.6	8.4	8.4	8.2	7.0	6.2	6.0	5.5	4.7	4.2	3.1	3.1	5.8
25	3.6	3.5	4.5	4.0	3.8	4.7	4.7	5.1	5.4	5.9	8.0	7.8	8.3	7.5	8.0	6.9	6.5	5.7	5.6	5.2	5.5	4.0	4.1	4.1	5.5
26	4.7	4.6	4.2	3.0	2.8	3.0	3.7	4.9	5.5	6.6	6.4	p7.2c	8.0	7.3	7.8	7.7	7.2	6.7	6.9	7.4	6.7	5.7	5.7	5.8	5.8
27	5.8	6.1	5.4	4.5	4.0	3.9	4.7	6.0	7.0	7.6	8.0	8.1	9.4	9.8	10.1	10.5	9.5	8.6	8.0	7.9	7.2	6.2	5.5	5.2	7.0
28	5.0	4.8	5.2	4.7	3.9	3.6	4.6	6.1	7.0	7.4	8.2	8.7	8.8	9.5	9.8	9.7	9.3	8.9	8.4	8.1	7.2	6.7	6.1	5.1	7.0
29	4.7	4.9	4.8	5.1	4.7	3.9	4.6	5.7	6.8	8.2	8.4	8.7	8.7	9.1	9.2	9.7	10.2	10.3	9.7	9.6	7.6	6.7	6.4	6.0	7.2
30																									
31																									
MEAN*	5.2	5.1	4.8	4.3	4.0	3.8	4.6	5.6	6.4	7.0	7.4	7.8	8.1	8.2	8.3	8.3	8.0	7.6	7.5	7.2	6.7	6.0	5.5	5.4	6.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 84

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1940 | MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS | FEBRUARY 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	245	200	265	235	250	290	250	275	275	330	310	330	300	340	305	310	290	300	280	235	240	270	295	290	282
2	290	275	310	350	240	295	250	300	340	370	280	p350	420	480	340	390	340	370	250	255	350	265	p260a	p260a	318
3	p265a	270	250	250	280	280	260	350	390	395	395	375	350	320	310	320	295	290	270	265	270	260	270	270	302
4	270	275	280	285	280	270	250	385	380	320	325	335	320	330	340	320	300	300	260	240	220	225	310	275	296
5	270	270	260	240	220	230	240	265	270	310	300	335	315	315	p310c	p300c	290	280	255	235	240	235	280	290	273
6	300	260	250	220	240	250	250	280	340	295	380	330	385	350	315	310	310	295	260	240	215	255	265	260	286
7	255	250	230	270	280	315	340	340	385	470	420	360	370	335	400	350	320	310	265	245	230	p250c	p270c	290	315
8	270	265	270	255	250	265	260	320	375	320	340	320	325	305	335	325	295	275	245	230	220	250	240	270	284
9	270	260	275	...a	...a	...a	250	265	305	290	310	360	340	360	340	310	325	300	270	250	230	p250a	270	285	...
10	280	275	250	255	245	260	260	300	320	330	280	300	310	300	310	300	300	290	265	235	225	230	245	260	276
11	265	245	225	p240c	250	280	235	280	290	265	265	310	345	340	315	315	300	275	255	240	210	230	240	240	269
12	285	285	p270a	260	245	260	260	295	340	390	440	380	365	585	460	360	350	350	280	250	240	270	320	300	327
13	270	240	240	210	215	240	240	260	300	290	300	300	310	300	320	315	290	270	240	240	225	260	280	315	270
14	340	280	235	230	230	260	260	225	295	305	335	305	320	310	305	290	290	270	235	235	230	250	270	260	274
15	250	225	270	270	300	285	240	230	280	295	325	300	300	310	310	305	290	270	240	235	230	250	p270a	285	274
16	285	p265a	p245a	230	260	290	250	245	300	300	335	300	300	300	315	300	285	260	240	235	240	235	250	290	273
17	280	270	260	240	245	250	250	230	275	300	300	310	300	320	310	315	290	270	235	240	230	245	245	...c	...
18	...c	...a	300	250	...a	...a	310	270	290	300	300	315	300	300	315	310	290	280	250	235	230	235	250	255	...
19	275	...a	270	260	260	270	240	235	265	285	290	285	300	330	310	300	270	270	240	245	225	255	270	265	...
20	255	255	255	p260a	p260a	285	250	230	290	300	365	350	340	320	310	295	300	280	250	235	230	240	250	290	279
21	335	290	270	260	240	310	350	370	380	390	400	340	360	310	300	290	275	290	240	240	260	260	270	250	303
22	250	270	250	300	260	250	265	285	350	315	360	350	440	375	370	360	325	300	255	240	225	250	275	p270a	300
23	270	p270a	280	270	280	285	265	280	290	450	450	455	400	490	445	425	400	375	250	250	240	260	285	320	333
24	...a	...a	...a	...c	...c	...a	300	...c	280	255	335	340	310	315	300	305	300	300	270	245	240	240	330	..a	...
25	p300a	290	p280a	275	250	250	240	300	350	430	370	390	310	330	340	310	300	295	280	265	250	295	325	300	305
26	315	280	270	290	340	...a	280	290	...a	315	...a	...c	290	320	310	300	270	255	250	240	...a	...a	280	300	...
27	p280a	260	260	270	260	p250a	245	230	270	290	280	310	320	p310a	p300a	290	265	255	245	230	235	225	255	270	267
28	265	...a	...a	...a	250	...a	245	235	265	295	285	290	320	300	300	290	280	265	250	230	235	250	245	240	...
29	360	320	300	260	240	265	240	235	225	270	285	265	310	315	320	315	285	270	250	240	235	250	270	300	276
30																									
31																									
MEAN*	281	266	264	261	257	270	261	279	311	327	334	332	334	342	330	318	301	290	254	241	238	250	272	278	287

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 85

FEBRUARY 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1940

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	3.7	4.3	4.8	4.9	5.0	4.9	5.2	5.0	4.8	4.3	4.3	4.1
2	...	3.8	4.0	4.1	4.1	4.5	4.6	4.9	4.7	4.6	4.5	4.2	...
3	...	4.0	4.4	4.7	4.8	4.8	4.9	4.9	4.8	4.8	4.5	4.3	3.5
4	...	4.0	4.3	4.5	4.8	5.0	4.9	5.0	4.8	4.8	4.7	4.3	3.7
5	...	4.0	4.6	5.0	4.9	5.3	5.1	4.9	...c	...c	4.5	4.3	3.4
6	...	4.1	4.5	4.4	4.8	4.9	5.0	4.9	4.8	4.8	4.6	4.3	3.5
7	3.1	3.8	4.3	4.6	4.7	4.8	4.9	4.9	4.9	4.7	4.7	4.4	3.6
8	...	4.0	4.7	4.7	5.1	5.0	5.1	4.9	5.1	4.9	4.8	4.4	3.4
9	...	4.1	4.5	4.7	5.0	5.0	5.0	5.0	4.8	4.8	4.6	4.3	3.5
10	...	3.9	4.7	4.8	4.9	...a	...a	5.2	5.0	4.9	4.9	...a	3.6
11	...	...	4.8	4.8	4.8	5.0	5.6	5.5	5.1	5.2	4.8	4.3	3.4
12	...	3.9	4.8	4.5	4.6	4.7	4.8	4.9	4.8	4.8	4.6	4.0	...
13	...	...	4.8	5.0	5.3	5.3	5.2	5.1	5.0	5.3	4.7	4.3	...
14	...	...	4.7	4.9	5.3	5.2	5.2	5.2	5.0	5.0	4.7	4.2	...
15	...	...	4.8	4.9	5.2	5.1	5.1	5.2	...a	5.0	4.8	4.1	...
16	...	...	4.5	4.9	5.2	5.1	5.2	5.2	5.2	4.8	4.8	4.1	...
17	...	...	4.7	5.0	4.9	5.2	5.2	5.5	5.0	4.9	4.8	4.1	...
18	...	...	4.6	4.8	4.9	4.9	4.9	5.0	4.9	4.9	4.7	4.5	...
19	...	...	4.5	4.8	4.9	4.9	5.0	5.3	5.1	4.7	4.5	4.3	...
20	...	...	4.4	4.8	5.1	5.0	5.0	4.9	4.9	4.8	4.7	4.3	3.3
21	2.7	3.8	4.1	4.5	4.8	5.0	5.0	4.9	4.8	4.5	4.3	3.9	...
22	...	3.8	4.5	4.5	4.6	4.6	4.8	4.8	4.7	4.7	4.5	4.3	3.1
23	...	3.6	4.3	4.5	4.6	4.6	4.7	4.7	4.6	4.6	4.5	4.3	...
24	...	3.8	4.4	4.4	5.1	4.8	4.8	4.8	4.8	4.7	4.4	4.0	3.2
25	...	3.5	4.4	4.4	4.7	4.6	4.7	4.7	4.8	4.8	4.4	4.0	3.3
26	...	...	...	4.5	...a	...c	4.9	4.8	4.8	4.8	4.5	3.9	...
27	...	...	4.4	4.8	4.9	4.8	5.2	...a	...a	4.9	4.5	3.9	...
28	...	...	4.5	5.0	4.8	5.0	5.1	5.1	5.1	4.9	4.6	4.1	...
29	...	...	4.4	4.8	5.0	5.2	5.3	5.1	5.1	5.0	4.7	...	...
30													
31													
* MEAN	2.9	3.9	4.5	4.7	4.9	4.9	5.0	5.0	4.9	4.8	4.6	4.2	3.5

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	240	220	225	215	200	190	190	220	215	180	240	245
2	...	215	190	200	180	240	240	240	...a	...a	250	230	...
3	...	245	220	220	230	220	...a	230	220	215	220	220	230
4	...	...a	210	200	200	180	290	240	190	180	200	225	235
5	...	230	225	210	...a	...a	190	200	...c	...c	200	235	240
6	...	235	235	230	215	210	195	190	200	215	220	235	225
7	265	230	210	200	210	190	180	200	220	225	235	220	230
8	...	235	230	230	...a	200	190	200	210	220	230	225	235
9	...	235	225	230	...a	195	200	215	220	230	235	230	250
10	...	...a	220	215	...a	...a	...a	185	...a	200	220	...a	235
11	...	...	210	215	185	175	160	200	205	200	200	215	235
12	...	230	215	210	...a	200	190	210	225	240	...a	...a	...
13	...	...	230	260	...a	200	225	...a	...a	205	215	240	...
14	...	...	210	200	200	220	200	185	205	210	215	220	...
15	...	...	220	225	220	...a	...a	230	...a	200	220	225	...
16	...	...	220	210	215	...a	...a	215	200	205	215	230	...
17	...	...	215	230	235	200	190	195	200	205	215	235	...
18	...	...	225	225	210	200	210	220	210	220	210	...a	...
19	...	...	230	210	220	220	210	220	215	215	210	225	...
20	...	...	230	225	200	185	210	200	195	210	215	220	240
21	270	240	205	200	200	245	240	190	230	210	210	210	...
22	...	240	220	210	200	200	215	...a	215	210	210	220	225
23	...	220	200	200	210	200	210	210	215	210	225	245	...
24	...	...	235	200	200	200	205	180	240	220	220	230	240
25	...	220	230	230	200	200	200	190	235	215	225	220	255
26	...	...	...	215	...a	...c	195	200	210	220	...a	...a	...
27	...	...	...c	215	235	195	200	...a	...a	...a	...a	230	...
28	...	...	...a	200	200	220	205	200	195	200	210	235	...
29	...	...	...a	...a	...a	...a	...a	...a	230	215	...a	...	...
30													
31													
* MEAN	268	232	219	216	209	204	206	205	213	212	216	228	237

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 86

FEBRUARY 1940 — FEBRUARY 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	p0.5e	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6
2	0.7	0.7	0.8	0.8	0.8	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.5
3	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.6
4	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6
5	0.5	0.7	0.8	0.8	0.7	0.7	0.8	0.7	p0.7c	p0.7e	0.6	0.6	p0.5e
6	p0.5e	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	p0.5e	p0.5e
7	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.6	p0.5e
8	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.8	0.6	0.5
9	p0.5e	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.7	0.8	0.6	0.6
10	0.6	0.6	0.7	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.6
11	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6
12	p0.5e	0.6	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.5
13	p0.5e	0.5	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.6
14	p0.5e	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	p0.5e
15	p0.5e	0.6	0.6	0.8	1.0	0.8	0.9	0.8	0.7	0.8	0.7	0.6	0.5
16	p0.5e	0.5	0.9	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.7	0.7	0.6
17	0.6	0.7	0.8	0.8	0.8	1.0	1.0	1.0	0.8	0.8	0.7	0.6	0.7
18	p0.5e	0.6	0.7	0.7	1.0	1.1	0.9	0.7	0.8	0.9	0.7	0.6	0.6
19	0.5	0.7	1.0	0.7	0.9	0.9	1.0	1.0	0.8	0.8	0.7	0.7	0.6
20	0.5	0.6	p0.7c	0.7	1.0	0.8	0.9	0.8	0.8	0.8	0.7	0.6	0.6
21	p0.5e	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.6	p0.5e
22	p0.5e	0.7	0.7	0.7	0.8	0.8	1.0	1.0	0.8	0.7	0.8	0.6	p0.5e
23	0.5	0.7	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.6	0.5
24	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.6
25	p0.5e	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6
26	p0.5e	0.6	0.8	0.6	0.7	p0.7c	0.7	0.8	0.9	0.9	0.8	0.6	0.6
27	0.6	0.5	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.0	0.8	0.6	0.6
28	p0.5e	0.6	0.7	0.7	0.7	0.7	0.7	0.9	0.8	0.7	0.7	0.6	0.7
29	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6
30													
31													
* MEAN	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.0	2.6	3.0	3.3	3.5	3.6	3.7	3.7	3.7	3.5	3.3	3.0	2.6
2	1.9	2.5	3.0	3.3	3.5	3.6	3.7	3.7	3.5	3.5	3.2	2.9	2.4
3	1.7	2.5	3.0	3.3	3.5	3.5	3.6	3.8	3.6	3.6	3.3	2.9	2.4
4	1.6	2.4	2.9	3.2	3.4	3.5	3.7	3.6	3.6	3.4	3.3	2.8	2.5
5	2.0	2.5	3.0	3.3	3.4	3.4	3.7	3.4	p3.4c	p3.4c	3.5	2.7	2.3
6	1.9	2.5	2.9	3.3	3.6	3.8	3.8	3.7	3.5	3.5	3.1	2.8	2.4
7	1.9	2.5	2.9	3.3	3.4	3.5	3.6	3.7	3.7	3.5	3.3	2.9	2.3
8	1.9	2.5	3.0	3.3	3.6	3.7	3.8	3.8	3.6	3.5	3.3	2.9	2.3
9	1.8	2.4	3.0	3.3	3.5	3.6	3.7	3.7	3.7	3.5	3.3	2.9	2.2
10	1.9	2.5	3.0	3.3	3.6	3.7	3.5	3.5	3.3	3.6	3.2	p2.8a	2.2
11	1.8	2.5	3.0	3.3	3.5	3.7	3.6	3.7	3.8	3.6	3.4	2.9	2.2
12	1.9	2.6	2.9	3.2	3.5	3.6	3.6	3.8	3.6	3.6	3.3	3.0	2.2
13	1.9	2.4	2.9	3.3	3.5	3.6	3.6	3.6	3.4	3.6	3.3	2.9	2.4
14	1.8	2.5	3.0	3.3	3.5	3.6	3.7	3.6	3.6	3.5	3.3	3.0	2.3
15	1.9	2.6	2.9	3.3	3.5	3.7	3.7	3.6	3.4	3.5	3.3	2.9	2.3
16	1.9	2.5	3.0	3.3	3.5	3.6	3.7	3.7	3.5	3.4	3.0	3.0	2.3
17	1.8	2.5	3.1	3.3	3.6	3.7	3.8	3.8	3.7	3.6	3.4	2.9	2.3
18	1.0	1.9	2.9	3.1	3.6	3.7	3.7	3.7	3.6	3.3	3.3	2.4	2.2
19	1.8	2.4	3.3	3.5	3.5	3.7	3.7	3.7	3.6	3.3	3.1	2.8	2.1
20	1.8	2.6	3.0	3.3	3.5	3.6	3.7	3.6	3.6	3.4	3.1	2.7	2.1
21	1.5	2.4	2.9	3.1	3.4	3.3	3.6	3.6	3.7	3.4	3.1	2.8	2.2
22	1.7	2.5	2.8	3.1	3.5	3.4	3.5	3.4	3.5	3.4	3.1	2.8	2.0
23	1.6	2.3	2.8	3.1	3.4	3.5	3.6	3.5	3.5	3.3	3.2	2.8	2.1
24	1.8	2.5	2.8	3.2	3.3	3.5	3.3	3.6	3.5	3.4	3.1	2.8	2.3
25	1.5	2.4	2.8	3.1	3.4	3.4	3.5	3.5	3.6	3.4	3.1	2.8	2.1
26	1.6	2.2	2.7	3.0	3.3	p3.4c	3.5	3.5	3.4	3.3	3.1	2.6	1.7
27	1.6	2.3	2.9	3.2	3.4	3.5	3.6	3.6	3.4	3.4	3.1	2.8	1.9
28	1.7	2.5	3.0	3.4	3.4	3.7	3.5	3.7	3.6	3.4	3.3	2.9	2.1
29	1.5	2.4	2.9	3.3	3.5	3.6	3.6	3.5	3.5	3.2	2.9	2.4	1.5
30													
31													
* MEAN	1.8	2.4	2.9	3.2	3.5	3.6	3.6	3.6	3.6	3.5	3.2	2.8	2.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

MARCH 1940

TABLE 87

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1940

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.0	6.0	5.9	6.0	5.6	4.4	4.6	6.9	8.2	7.7	8.4	8.8	9.3	9.1	9.1	9.3	10.0	9.8	9.7	8.5	7.0	5.7	4.6	4.4	7.3
2	4.4	4.3	3.8	3.7	3.2	3.2	4.3	6.2	6.5	6.7	7.6	8.3	8.7	8.8	9.0	9.2	8.6	8.8	8.6	8.3	7.2	6.3	5.7	5.4	6.5
3	5.5	5.2	5.2	4.7	4.3	4.0	5.3	6.4	6.8	7.5	7.8	8.0	8.6	9.4	9.6	9.7	9.6	9.3	8.8	8.4	7.9	6.5	6.0	5.6	7.1
4	5.4	5.4	5.2	5.0	4.6	4.1	4.7	6.2	7.0	7.7	7.7	8.2	9.0	9.8	...c	...c	...c	9.3	9.3	8.8	7.5	6.4	5.9	5.6	...
5	5.5	5.5	5.4	4.9	4.1	3.8	4.7	6.7	7.7	8.1	8.3	8.9	9.2	9.5	9.6	9.2	9.6	10.2	10.0	8.0	6.8	6.5	6.0	5.9	7.2
6	5.8	6.0	5.5	5.1	4.4	4.1	4.9	7.1	7.9	8.3	8.8	9.3	10.2	10.2	10.5	10.4	9.8	9.7	9.5	9.0	7.8	7.2	6.8	6.6	7.7
7	6.7	6.4	6.0	5.2	4.6	4.3	5.0	6.6	8.6	8.8	8.8	9.7	10.4	10.5	10.9	11.1	10.5	10.3	10.2	9.5	8.4	7.3	6.6	6.3	8.0
8	6.4	6.4	6.0	5.5	4.8	4.2	5.2	7.4	7.5	9.0	9.9	10.3	11.3	11.5	p11.4c	11.2	10.8	10.2	9.9	9.6	8.2	7.7	6.9	6.2	8.2
9	6.0	5.9	5.7	5.3	5.4	4.9	5.2	5.3	5.0	6.0	6.7	6.6	7.0	7.1	6.6	6.4	6.3	6.3	6.0	5.3	5.3	4.8	4.7	4.9	5.8
10	5.2	5.5	5.8	4.9	5.0	4.5	5.2	7.3	6.8	9.0	9.6	10.2	10.2	9.9	9.1	9.2	9.1	8.8	8.8	6.6	5.8	4.5	4.4	4.3	7.1
11	4.2	4.4	4.4	4.0	4.4	4.3	4.4	6.5	6.6	6.7	7.6	8.0	8.8	9.2	p9.3c	9.4	9.7	9.2	7.6	6.7	6.2	5.1	4.9	4.7	6.5
12	4.7	4.5	4.5	4.0	3.4	3.5	4.8	6.5	7.4	7.8	8.1	8.9	9.7	9.8	10.0	10.1	10.5	10.0	9.2	8.2	6.7	5.2	5.0	4.8	7.0
13	4.7	4.6	4.5	4.3	4.1	4.0	4.5	5.2	6.0	7.0	8.2	8.5	8.4	10.0	10.6	10.0	9.4	8.5	7.3	6.5	6.4	6.0	6.0	5.8	6.7
14	5.4	4.9	4.5	4.3	4.1	4.1	4.0	5.7	6.5	7.3	8.4	8.8	8.9	8.6	8.9	9.5	8.8	9.9	9.3	8.4	6.9	6.0	5.5	5.1	6.8
15	5.2	5.2	5.1	5.3	4.8	4.3	4.7	6.6	7.4	7.9	8.3	9.2	10.1	10.6	10.2	10.0	9.8	9.4	9.2	8.6	7.3	5.8	5.5	5.4	7.3
16	5.2	4.9	4.7	4.4	4.1	4.0	4.8	6.0	7.0	7.3	7.9	9.0	9.7	10.0	10.7	10.9	10.7	10.4	10.1	8.9	6.7	5.5	5.6	5.7	7.3
17	5.3	5.5	4.7	4.3	4.3	4.3	4.9	6.2	6.6	6.4	6.3	7.0	7.3	8.1	8.1	8.1	7.5	7.2	6.9	6.2	8.9	5.5	5.3	5.0	6.2
18	4.4	4.6	4.8	5.0	5.0	4.5	4.7	6.2	7.0	8.0	8.4	[illegible].5	8.9	9.2	9.5	9.5	8.8	8.7	8.5	8.0	p7.0c	6.0	5.9	5.5	6.9
19	5.4	5.2	5.2	5.3	5.1	4.5	4.8	6.9	8.1	8.6	8.0	8.6	9.3	9.7	10.1	10.3	10.6	9.8	9.2	8.5	6.7	p6.5c	6.3	6.0	7.4
20	5.1	5.0	4.8	5.0	4.7	4.5	4.8	6.9	8.2	7.5	8.0	9.7	10.1	9.0	8.8	8.2	7.7	7.6	7.2	6.4	5.7	5.0	4.8	3.6	6.6
21	4.2	4.2	4.0	3.6	3.1	2.8	4.5	5.9	7.3	7.3	7.3	8.0	...c	...c	...c	...c	...c	8.2	7.4	6.5	5.9	4.8	4.4	4.4	...
22	3.8	3.8	3.8	3.5	3.2	3.0	3.3	6.3	7.5	8.2	8.0	8.4	9.2	9.5	9.8	9.7	9.3	8.9	8.7	7.5	6.1	5.5	5.4	5.3	6.6
23	5.0	4.7	4.5	4.4	4.4	4.0	4.1	6.5	8.1	8.9	8.8	9.4	10.0	10.4	10.5	10.7	10.3	10.6	9.0	9.0	8.2	7.1	7.1	5.4	7.6
24	5.0	4.9	4.7	4.7	4.6	3.9	4.0	6.5	9.3	10.1	10.1	10.5	10.4	11.4	11.9	11.9	11.9	11.1	10.3	8.9	7.5	6.2	5.1	5.2	7.9
25	4.5	3.0	...a	3.0	2.3	2.3	2.9	3.2	3.5	3.8	4.0	4.1	4.3	4.5	4.8	4.8	4.8	5.0	5.0	6.0	6.1	5.8	4.8	4.0	...
26	4.0	4.2	4.3	3.8	3.6	1.9	3.0	6.4	7.4	8.4	9.1	10.5	10.4	11.5	11.0	11.7	11.1	10.9	10.0	8.0	6.4	5.7	4.9	4.5	7.2
27	4.3	4.4	4.4	3.9	3.1	2.5	3.4	6.4	8.1	8.7	8.8	9.5	11.3	12.9	12.4	12.6	10.9	9.9	8.6	7.7	8.0	7.6	7.2	6.2	7.6
28	5.4	5.4	5.2	5.4	5.1	4.7	4.6	7.3	8.0	9.9	10.3	10.7	10.5	11.2	11.5	11.9	12.0	11.9	10.6	8.0	7.2	7.1	6.1	5.5	8.2
29	5.3	5.2	5.2	5.0	4.2	4.0	4.5	7.1	9.7	11.0	10.4	11.1	11.7	11.4	11.8	12.1	11.6	11.4	10.5	8.8	7.2	6.4	5.9	6.0	8.2
30	6.0	4.5	3.0	2.3	2.7	3.3	3.3	4.1	4.6	5.0	...b	...b	4.9	4.9	...b	5.4	5.2	5.2	5.7	4.3	5.9	6.0	4.9	4.4	...
31	4.1	3.8	3.3	3.6	3.9	2.7	4.1	6.4	8.5	8.6	10.2	10.5	11.8	11.2	11.4	11.4	11.6	11.1	9.6	8.0	6.9	p6.3	5.8	5.5	7.5
MEAN*	5.1	5.0	4.8	4.5	4.2	3.8	4.4	6.3	7.2	7.8	8.3	8.9	9.3	9.6	9.9	9.8	9.5	9.3	8.7	7.8	7.0	6.1	5.6	5.3	7.0

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 88

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MARCH 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	290	275	290	265	240	250	260	245	250	275	315	300	310	295	310	315	290	275	240	220	210	230	250	285	270
2	280	270	270	240	275	210	200	260	265	310	340	320	310	320	315	310	285	280	250	225	225	240	260	270	272
3	295	300	280	260	270	270	310	250	280	290	310	320	340	330	335	315	295	280	245	240	235	225	250	260	283
4	270	265	270	245	250	250	260	270	270	285	280	320	335	310	...c	...c	...c	270	245	220	225	225	260	265	...
5	265	255	245	225	225	260	260	240	260	260	300	310	300	305	310	305	300	275	240	210	220	245	260	270	264
6	270	255	245	220	265	...a	250	235	250	270	290	310	305	300	290	280	280	270	240	220	230	240	260	260	...
7	260	240	240	220	245	250	250	240	265	260	275	310	290	320	320	290	280	260	240	220	220	230	240	270	260
8	280	240	230	225	225	260	260	225	265	265	280	300	300	290	p290	285	270	235	240	225	230	250	235	255	257
9	275	270	270	275	270	270	285	265	470	380	470	440	410	400	375	370	345	285	260	260	260	265	290	290	323
10	290	290	250	250	255	245	240	235	230	260	310	310	285	290	290	305	270	260	220	210	230	240	280	260	263
11	280	270	250	250	250	265	260	220	250	260	310	310	300	285	p290	290	280	250	215	225	220	230	260	270	262
12	260	250	240	245	250	280	255	235	225	250	290	305	300	290	290	290	270	250	235	215	210	245	270	270	259
13	260	280	280	290	290	295	265	235	265	320	310	300	340	310	290	285	275	240	230	250	250	270	270	260	278
14	250	250	250	250	p255c	p265c	270	250	290	280	285	300	295	310	310	315	290	260	360	215	215	240	255	260	272
15	270	260	255	240	225	250	265	220	240	260	270	290	295	285	280	280	270	250	235	215	210	225	250	260	254
16	255	255	260	235	240	240	240	220	250	255	285	285	280	310	295	295	275	255	235	210	210	260	275	260	258
17	260	240	230	245	270	300	265	240	310	300	410	390	345	330	320	315	300	270	245	245	240	250	250	250	284
18	230	270	265	260	235	225	240	225	255	270	290	300	305	310	300	290	280	250	240	p235c	p230c	230	240	240	259
19	245	255	260	240	230	230	260	240	240	255	280	290	300	300	305	300	275	245	230	235	...a	...c	265	250	...
20	275	280	305	280	265	280	290	275	260	275	365	335	315	345	305	300	290	270	240	245	245	260	270	270	285
21	255	250	265	255	285	310	270	320	230	260	310	330	...c	...c	...c	...c	...c	260	230	220	230	240	270	290	...
22	290	290	280	240	245	290	270	235	265	260	285	290	310	300	295	300	275	260	230	230	220	250	260	250	268
23	250	250	250	260	240	250	265	235	265	255	250	305	305	300	295	280	280	250	235	240	250	270	260	255	262
24	300	300	300	280	250	220	270	255	225	260	265	315	280	310	290	295	255	250	225	220	220	230	260	300	266
25	300	345	...a	240	310	320	250	345	325	290	...b	...b	...b	250	720	710	640	465	430	300	280	250	240	320	...
26	310	270	...a	280	230	300	230	245	225	250	230	285	275	265	270	230	240	240	215	220	235	240	245	275	...
27	295	295	260	235	245	270	260	230	250	260	265	305	310	285	290	250	255	235	215	250	240	240	235	225	258
28	245	...a	...a	280	265	240	255	240	250	255	250	270	270	280	290	270	265	230	210	210	250	245	235	260	...
29	265	270	250	240	240	260	245	220	250	240	250	260	230	280	270	270	250	240	230	215	220	260	295	310	255
30	260	300	420	485	415	320	350	290	690	540	...b	...b	535	600	...b	420	380	260	290	400	350	275	275	250	...
31	300	260	295	325	235	230	245	230	235	260	235	280	260	250	270	230	250	230	220	310	330	300	310	250	264
* MEAN	272	270	268	261	258	264	263	247	277	281	298	310	313	312	315	312	293	263	246	237	238	247	261	266	274

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 89

MARCH 1940 | MARCH 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.4	4.4	5.1	4.9	5.4	5.0	5.2	4.8	4.7	4.2	...
2	...	...	4.0	4.9	5.2	5.1	5.1	5.2	5.0	4.9	4.6	4.3	...
3	...	...	4.1	4.8	5.2	5.1	5.3	5.3	5.2	5.0	4.8	4.2	...
4	...	3.7	4.4	4.7	5.2	5.3	5.5	5.3	...c	...c	...c	4.5	...
5	...	...	4.3	4.6	5.1	5.5	5.2	5.2	5.1	5.0	4.6	4.2	...
6	...	...	4.3	4.6	5.0	5.4	5.2	5.1	5.3	5.0	4.8	4.2	...
7	...	...	4.6	4.9	4.9	5.4	5.1	5.3	5.3	5.3	4.5	4.2	...
8	...	...	4.2	4.6	4.9	5.2	5.4	5.2	p5.1	5.0	4.6	...	...
9	...	3.3	4.3	4.5	4.7	4.7	4.8	4.8	4.8	4.7	4.6	3.8	...
10	...	...	...	4.9	5.0	5.3	5.1	5.1	4.8	5.3	4.7	3.6	...
11	...	...	4.2	4.4	5.0	5.1	5.2	5.1	p5.0	4.8	4.5	3.8	...
12	...	...	...	4.7	5.0	5.2	4.9	5.0	5.0	4.8	4.7	4.2	...
13	...	...	4.0	5.2	5.2	...a	5.5	5.4	5.0	5.0	4.2	3.6	...
14	...	...	4.2	4.9	5.1	5.0	5.0	5.2	5.2	5.3	5.0	4.1	...
15	...	...	4.3	4.8	4.8	5.3	5.2	5.3	5.0	4.9	4.5	3.6	...
16	...	...	4.3	4.4	4.9	5.1	5.2	5.2	5.0	4.8	4.5	3.7	...
17	...	...	4.4	4.6	5.0	5.0	5.0	5.0	4.9	4.9	4.3	3.7	...
18	...	...	3.5	4.5	4.9	5.0	5.1	5.2	4.9	5.0	...	...	...
19	...	...	4.2	4.6	4.9	4.9	5.1	5.4	5.0	5.1	4.5	...	...
20	...	3.7	4.1	4.6	5.3	5.3	5.4	5.2	5.0	4.8	4.7	...	...
21	...	...	4.1	4.2	4.8	5.3	...c	...c	...c	...c	...c	...	...
22	...	...	4.3	4.6	5.0	4.9	5.3	5.1	5.1	5.0	4.6	...	...
23	...	...	4.6	4.6	4.7	5.3	5.3	4.8	5.5	4.7	4.5	3.9	...
24	...	...	3.8	4.9	4.9	5.8	...a	5.8	5.2	...b	...	...	...
25	...	...	...	...	...b	...b	...b	...b	4.6	4.3	4.2	3.9	3.3
26	...	...	4.0	4.6	5.1	5.1	5.3	5.1	5.0	5.0	4.3	...	...
27	...	...	4.0	4.7	4.8	5.2	5.3	5.2	4.9	4.8	4.2	...	...
28	...	...	4.3	4.7	4.6	4.6	...	5.6	5.5	4.5	4.6	...	...
29	...	...	4.3	4.8	4.7	5.0	5.2	5.2	4.8	5.0	4.7	...	...
30	...	...	4.0	4.1	...b	...b	4.3	4.3	...b	4.3	4.3	...	...
31	...	...	4.1	4.5	4.5	5.0	...	4.9	4.7	...	4.3	...	...
MEAN*	...	3.6	4.2	4.5	5.0	5.1	5.2	5.2	5.0	4.9	4.5	4.0	3.3

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	225	205	210	215	250	...a	260	235	240	240	...
2	...	...	...a	275	275	230	260	...a	260	235	230	230	...
3	...	...	245	220	210	185	210	240	220	230	230	240	...
4	...	240	240	210	200	195	200	200	...	...	...	230	...
5	...	...	225	220	200	200	200	225	220	220	210	235	...
6	...	...	220	225	215	220	225	230	220	230	220	240	...
7	...	...	235	220	190	200	220	225	215	240	230	230	...
8	...	...	230	220	210	200	220	230	...	240	235	...	...
9	...	245	240	230	220	210	240	265	270	265	260	250	...
10	...	...	...	220	210	220	230	250	240	235	230	240	...
11	...	...	235	215	200	215	220	215	...	230	230	230	...
12	...	...	...	225	225	225	200	210	220	220	240	240	...
13	...	...	225	220	250	...a	...a	...a	230	220	220	235	...
14	...	...	230	230	210	230	220	250	235	210	250	...a	...
15	...	...	210	...a	...a	225	220	...a	240	...a	...a	...a	...
16	...	...	225	220	220	210	215	220	215	210	230	225	...
17	...	...	230	240	230	210	210	220	215	225	230	240	...
18	...	...	200	230	210	210	225	235	210	220	...	...	...
19	...	...	235	220	215	...a	205	...a	220	...a	230	...	...
20	...	250	235	...a	230	...a	...a	...a	...a	...a	...a	...	...
21	...	...	...	210	240	230	...c	...c	...c	...c	...	...	...
22	...	...	220	215	220	200	200	225	230	220	235	...	...
23	...	...	230	225	220	200	210	190	200	220	230	240	...
24	...	...	225	230	235	225	...a	...a	245	...b	...	...	...
25	...	...	...	...	...b	...b	...b	...b	240	250	250	280	285
26	...	...	220	220	200	220	215	200	215	210	230	...	...
27	...	...	215	220	205	200	205	220	210	200	215	...	...
28	...	...	225	...a	210	200	...	220	210	220	230	...	...
29	...	...	220	230	220	210	220	200	220	225	230	...	...
30	...	...	265	250	...b	...b	275	270	...b	270	255	...	...
31	...	...	225	230	200	200	...	225	205	...	230	...	...
MEAN*	...	245	228	225	217	211	221	226	227	228	233	239	285

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 90

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1940 MARCH 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.9	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	2.4	3.0	3.0	3.3	3.0	3.7	3.0	3.4	3.1	3.2	2.8	2.0
2	...	...e	0.6	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.5	...a	...a	2.4	3.1	3.5	3.6	3.8	3.6	3.3	2.7	3.2	2.8	2.1
3	...	0.6	0.7	0.7	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.8	0.6	1.2	2.4	2.4	3.5	3.5	3.6	3.8	3.4	...a	...a	3.3	2.9	2.1
4	...	0.6	0.9	0.8	0.9	1.0	0.9	0.7	...	...	...	0.7	0.6	1.8	2.5	3.0	3.4	3.7	3.7	3.8	3.3	...c	...c	...c	2.8	2.1
5	...	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.7	0.6	1.6	2.5	2.9	3.3	3.5	3.6	3.7	3.8	3.7	3.5	3.2	2.8	2.0
6	...	0.6	0.7	0.7	0.9	0.8	1.0	1.0	0.9	1.0	0.7	0.7	0.6	1.6	2.4	2.9	3.2	3.3	3.6	3.7	3.8	3.7	3.5	3.3	2.8	2.0
7	...	0.7	0.7	0.7	0.7	0.8	0.9	1.0	0.9	0.8	0.9	0.7	0.6	1.6	2.5	2.8	3.2	3.4	3.6	3.6	3.7	3.5	3.4	3.0	2.5	2.0
8	...	0.6	0.9	0.8	1.0	0.9	0.9	1.0	p0.9c	0.7	0.7	0.5	0.6	1.7	2.2	3.0	3.3	3.4	3.5	3.7	3.7	...c	3.6	3.3	2.8	...a
9	...	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.8	0.7	0.6	1.5	2.3	2.9	3.3	3.5	3.6	3.6	3.5	3.6	3.5	3.3	2.7	2.1
10	...	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.6	0.6	1.1	2.3	2.8	3.4	3.5	3.6	3.7	3.6	3.6	3.5	3.1	2.6	1.9
11	...	0.6	0.7	0.6	0.8	0.8	0.7	0.7	p0.7c	0.7	0.6	0.6	...e	1.6	2.1	2.6	3.2	3.4	3.6	3.7	3.6	...c	3.3	3.1	2.6	1.8
12	...	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	1.4	2.3	3.0	3.1	3.4	3.5	3.6	3.6	3.5	3.3	3.0	2.2	1.7
13	...	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	1.5	2.2	2.8	3.3	3.4	3.6	3.6	3.6	3.4	3.5	3.1	2.7	1.9
14	...	0.6	0.7	0.8	0.7	0.8	1.0	1.0	0.8	0.7	0.7	0.6	...e	1.0	2.3	2.7	3.1	3.4	3.6	3.6	3.6	3.5	3.3	2.9	2.4	2.0
15	...	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.7	0.7	0.7	0.6	1.4	2.2	2.9	3.2	3.5	3.6	3.7	3.7	3.6	3.5	3.2	2.5	1.8
16	...	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	1.4	2.2	3.0	3.2	3.5	3.6	3.7	3.6	3.4	3.3	3.1	2.5	1.8
17	...	0.7	0.7	0.7	0.9	0.9	1.0	1.0	0.8	0.7	0.8	0.6	0.6	1.4	2.3	2.7	3.3	3.4	3.6	3.6	3.6	3.6	3.5	3.2	2.7	1.8
18	...	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	1.4	2.3	2.9	3.1	3.5	3.5	3.5	3.4	3.5	3.5	3.0	2.6	1.8
19	...	0.6	0.6	0.7	0.7	0.6	0.8	0.7	0.9	1.0	0.8	0.7	0.6	1.4	2.3	3.0	3.1	3.4	3.6	3.6	3.6	3.5	3.2	3.0	2.6	1.4
20	...	0.7	0.7	0.8	0.8	0.7	1.0	1.0	1.0	0.9	0.7	0.6	0.6	1.2	2.3	2.8	3.1	3.4	3.5	3.7	3.7	3.6	3.4	3.1	2.6	...a
21	...	0.6	0.6	0.6	0.7	1.2	...c	...c	...c	...c	...c	0.8	0.6	1.3	2.0	2.7	3.0	3.4	3.6	...c	...c	...c	...c	...c	2.6	1.8
22	...	0.7	0.7	0.9	0.9	0.8	1.0	1.2	0.9	0.8	0.7	0.6	0.5	1.1	2.0	2.9	3.2	3.5	3.6	3.6	3.7	3.6	3.4	3.0	...a	2.0
23	...	0.7	1.2	2.1	1.8	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.6	1.4	2.4	3.1	3.3	3.6	3.6	3.6	3.5	3.4	3.0	3.0	2.5	1.8
24	...	0.7	0.9	1.1	1.0	1.0	1.0	1.0	1.0	4.5	1.8	0.7	0.6	1.3	2.2	2.9	3.3	3.5	3.6	3.6	3.4	3.4	...b	2.0	2.6	1.9
25	...	0.7	0.9	1.2	1.7	1.8	2.0	1.0	0.9	0.8	0.8	0.8	0.6	0.9	2.3	2.7	3.1	...b	...b	...b	3.6	3.4	3.2	3.0	2.5	2.4
26	...	0.5	0.6	0.6	1.0	0.9	1.0	0.8	0.9	0.8	0.8	1.0	0.5	1.5	2.1	2.9	3.0	3.1	3.5	3.6	3.4	3.4	3.2	3.0	2.5	1.5
27	...	0.8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	0.8	0.7	0.8	1.3	2.4	2.8	3.0	3.1	3.3	3.6	3.6	3.5	3.3	3.0	2.5	1.8
28	...	0.8	1.0	1.0	1.1	1.2	1.7	1.2	1.3	0.9	0.8	0.8	0.6	1.2	2.5	2.9	3.3	3.4	3.2	3.5	3.6	3.6	3.4	3.1	2.5	1.5
29	...	0.8	0.7	0.8	1.0	0.8	0.9	1.0	1.0	0.9	0.7	0.7	0.6	1.0	2.4	2.8	3.2	3.5	3.5	3.6	3.8	3.6	3.3	3.1	2.5	1.6
30	...	0.6	0.7	1.0	...b	...b	1.8	1.7	...b	1.0	0.8	0.7	0.7	1.6	2.4	2.9	3.0	...b	...b	3.3	3.6	...b	3.5	3.0	2.4	1.8
31	...	0.7	0.7	0.8	0.8	1.0	0.9	0.9	0.8	0.8	0.8	0.5	0.5	1.5	2.1	2.9	3.0	3.2	3.4	3.7	3.6	3.4	3.3	2.9	2.7	1.8
MEAN*	...	0.7	0.8	0.8	0.9	0.9	1.0	1.0	0.9	1.0	0.8	0.7	0.6	1.4	2.3	2.8	3.2	3.4	3.5	3.6	3.6	3.5	3.3	3.1	2.6	1.9

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 91

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1940 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — APRIL 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.5	4.0	3.5	3.9	4.0	3.6	3.3	4.9	5.4	5.9	6.2	6.5	6.3	7.0	6.7	7.3	7.1	6.6	6.5	6.0	5.0	5.1	5.1	4.1	5.4
2	3.8	3.6	3.3	3.5	3.0	3.0	3.1	4.6	5.5	6.5	6.9	8.4	8.9	8.5	9.0	8.7	9.2	8.8	7.8	6.0	5.2	4.7	4.2	4.3	5.8
3	4.1	4.1	3.8	3.9	3.5	2.4	3.1	5.1	7.1	6.3	7.1	7.3	8.2	9.6	10.2	10.0	7.5	6.6	5.4	4.9	4.6	4.6	4.2	4.3	5.8
4	4.0	4.0	3.9	3.8	3.7	3.8	4.1	8.0	10.6	10.1	11.0	10.9	12.0	12.0	p11.5c	p11.0c	10.2	9.5	8.9	7.4	5.5	5.2	5.0	4.7	7.5
5	4.5	4.2	4.1	4.1	4.0	3.6	4.0	7.3	8.5	9.8	10.3	p10.9c	11.5	11.0	11.7	11.6	11.3	11.0	10.0	7.5	6.7	6.5	5.2	5.3	7.7
6	5.0	4.8	4.6	4.6	4.7	4.5	4.3	6.6	9.3	9.7	9.8	9.9	11.5	11.3	11.3	12.2	12.2	11.7	10.7	7.5	6.2	5.5	4.8	4.6	7.8
7	4.6	4.5	4.5	4.6	3.7	3.1	3.7	6.9	8.3	10.0	9.7	10.5	11.0	11.6	11.2	11.0	11.6	11.3	10.3	8.6	7.0	6.0	5.5	5.4	7.7
8	5.4	5.1	4.5	4.4	4.0	4.0	4.6	7.3	9.2	9.9	10.7	10.3	11.0	10.4	10.4	10.8	10.6	10.7	10.0	7.8	7.0	6.3	5.7	5.5	7.7
9	4.9	4.5	4.4	4.6	4.2	4.2	4.6	7.0	9.0	9.6	10.3	10.5	11.2	11.1	10.9	10.6	10.4	10.7	9.6	8.1	6.7	6.3	6.1	5.2	7.7
10	5.0	4.8	4.7	4.9	4.9	4.7	4.6	7.3	9.1	9.8	10.1	9.5	10.7	10.7	11.1	10.9	11.0	10.8	10.5	8.5	6.7	5.9	4.9	4.7	7.7
11	4.7	4.5	4.4	4.8	4.5	4.1	4.3	7.0	9.0	9.3	10.1	9.7	9.7	10.8	11.3	11.8	11.2	11.3	10.2	7.4	5.3	4.9	4.6	4.6	7.5
12	4.8	4.8	4.5	4.1	3.8	3.5	3.8	7.0	8.2	10.3	11.3	10.5	9.8	11.0	11.0	10.7	11.0	10.3	9.2	7.5	6.2	5.8	5.4	5.3	7.5
13	5.3	5.3	5.2	5.1	3.9	3.5	3.8	7.0	8.8	9.9	10.7	11.0	11.1	11.6	11.6	11.7	11.7	10.8	9.7	7.5	6.6	6.7	6.5	6.3	8.0
14	6.2	6.2	5.6	5.2	4.8	3.8	4.2	7.3	10.0	10.5	10.8	10.9	10.9	11.0	11.3	11.7	12.2	11.4	10.1	8.0	6.5	6.0	5.3	5.1	8.1
15	4.7	4.8	4.5	4.6	4.5	4.6	4.8	7.2	8.8	10.4	10.7	11.1	11.5	11.7	11.7	12.0	11.5	11.4	9.6	7.4	6.0	5.5	5.3	4.4	7.9
16	4.6	4.6	4.9	5.2	4.3	3.6	4.1	7.5	9.3	11.0	11.0	10.5	11.5	12.4	12.4	12.0	10.6	9.6	8.8	p7.5c	6.5	6.2	5.5	5.2	7.9
17	4.4	4.4	4.3	4.4	4.5	4.6	4.5	7.2	8.7	9.4	10.7	12.0	11.4	10.9	11.5	11.9	11.1	10.6	9.3	7.0	5.9	5.9	5.4	4.8	7.7
18	4.6	4.6	4.7	4.8	4.2	4.1	4.2	8.6	9.0	10.5	10.1	11.3	11.1	10.9	11.8	11.6	11.5	10.3	9.4	7.5	6.2	5.3	4.9	4.8	7.8
19	5.0	5.0	5.2	5.2	4.2	3.8	4.0	7.0	9.3	10.7	10.8	10.6	11.0	11.0	11.3	11.6	11.9	10.8	9.1	7.3	6.2	5.7	5.8	5.6	7.8
20	5.4	5.1	5.0	5.0	4.3	4.2	4.2	7.2	9.9	11.1	11.6	11.2	10.3	11.1	11.6	11.1	10.8	10.7	9.1	7.5	6.1	6.1	5.0	4.6	7.8
21	4.3	4.5	4.8	4.7	3.8	3.6	4.0	6.7	8.8	10.3	10.6	11.9	11.6	11.8	12.4	11.9	11.5	11.2	9.4	8.0	7.2	6.9	5.9	5.4	8.0
22	5.3	5.2	5.0	4.8	3.5	3.3	3.5	6.5	9.2	10.5	11.8	11.7	10.9	11.7	12.4	12.2	12.0	11.7	10.9	8.7	7.1	5.3	4.5	4.6	8.0
23	4.3	3.4	5.1	5.4	4.8	4.3	4.0	6.5	9.0	11.0	12.0	12.0	11.8	12.2	11.8	11.5	10.8	9.8	9.0	7.0	5.8	5.2	4.8	4.8	7.8
24	4.7	4.5	4.8	4.3	3.7	3.7	3.8	6.7	8.8	9.6	11.0	10.0	10.0	9.8	10.7	11.0	10.4	10.3	8.4	6.6	5.7	4.5	4.4	4.2	7.2
25	4.3	4.4	4.8	4.8	3.8	3.2	3.2	6.4	8.7	9.8	10.6	10.7	9.1	10.0	11.8	13.4	12.6	10.7	8.9	7.3	7.1	7.1	6.9	7.1	7.8
26	5.5	4.5	4.1	4.0	3.8	4.0	3.8	6.6	11.8	8.2	9.1	10.9	11.3	12.6	12.4	12.2	11.2	10.6	9.4	7.5	6.3	5.2	4.7	4.9	7.7
27	4.8	4.7	5.0	4.8	3.7	3.5	3.0	5.6	7.0	8.4	9.7	9.4	10.2	10.8	10.8	10.7	10.8	9.3	9.1	6.5	5.5	4.9	4.8	4.9	7.0
28	4.7	4.6	4.6	4.8	3.5	3.8	3.9	6.6	8.0	9.2	11.0	10.2	9.2	10.5	11.1	10.7	10.5	9.2	7.5	5.7	5.3	5.1	4.4	4.2	7.0
29	4.2	4.0	4.2	4.4	3.9	3.4	2.9	6.2	7.6	9.2	9.7	11.2	10.0	10.5	11.3	11.0	10.7	10.1	8.7	6.6	5.4	4.6	3.8	3.8	7.0
30	4.0	4.1	4.1	3.9	3.6	3.2	3.2	6.2	8.2	9.2	9.8	10.2	9.6	9.8	10.6	10.4	9.9	8.4	7.5	6.3	6.3	5.1	4.5	4.0	6.8
31																									
MEAN*	4.7	4.6	4.5	4.6	4.0	3.8	3.9	6.7	8.7	9.5	10.2	10.4	10.5	10.8	11.2	11.2	10.8	10.2	9.1	7.2	6.1	5.6	5.1	4.9	7.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 92

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1940 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS APRIL 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	295	330	400	340	310	270	285	270	325	350	385	440	420	400	370	330	290	250	250	225	255	240	255	255	314
2	275	280	300	270	270	290	300	270	360	320	305	305	290	310	295	275	280	240	225	210	235	250	250	260	278
3	265	270	280	270	310	330	280	280	250	275	330	410	480	410	350	310	330	255	245	265	265	275	285	280	304
4	270	270	290	270	265	330	310	230	230	240	255	260	280	265	...c	...c	...a	240	215	...a	230	...a	250	...a	...
5	275	250	265	260	240	235	250	225	230	245	245	250	270	255	275	250	245	230	210	200	240	240	230	255	245
6	245	250	255	255	240	225	220	210	240	230	240	255	275	270	260	280	255	230	210	210	215	240	250	255	242
7	250	250	250	235	215	220	250	225	230	240	260	265	285	275	270	260	265	240	220	210	215	220	240	245	243
8	245	220	225	225	235	265	240	225	240	240	260	250	270	265	260	265	240	240	220	220	230	230	225	230	240
9	215	240	260	255	225	240	230	220	225	245	250	265	250	270	265	250	250	245	220	240	225	240	240	230	241
10	250	250	255	255	235	230	230	225	225	250	245	240	260	265	270	250	250	...a	220	220	210	225	230	270	...
11	250	250	260	240	230	240	230	220	235	230	250	240	260	270	280	265	250	230	225	215	230	270	275	270	246
12	275	255	270	240	...c	...c	270	240	220	270	250	240	240	290	250	260	250	230	215	210	220	245	250	265	...
13	250	250	235	220	220	255	260	220	230	240	250	250	270	265	280	250	250	230	210	220	250	260	250	260	245
14	250	235	240	230	230	250	260	240	240	235	240	250	265	270	270	275	245	230	220	210	220	240	235	260	243
15	245	270	265	260	255	250	220	220	230	240	250	260	255	275	265	250	240	240	200	210	210	275	230	270	245
16	270	275	275	240	220	230	260	240	240	240	250	270	270	270	260	240	230	225	220	225	230	240	235	260	246
17	...a	250	265	290	250	250	225	225	235	235	250	260	260	260	265	260	230	230	220	220	235	250	230	250	...
18	250	280	270	250	220	260	260	235	245	255	245	260	250	260	270	260	245	225	215	210	230	235	270	260	248
19	270	265	250	230	205	230	255	250	230	245	255	250	270	270	270	265	245	220	215	215	230	240	260	250	245
20	250	245	245	240	245	260	245	240	240	250	255	245	270	285	295	260	225	225	210	215	225	235	220	255	245
21	270	265	250	235	220	275	260	220	230	240	250	280	270	275	275	250	245	230	220	230	260	235	225	260	289
22	270	245	250	230	230	270	250	225	240	250	245	250	290	290	265	270	245	230	220	240	230	...a	265	280	...
23	270	280	260	240	230	230	230	225	230	240	245	250	270	260	250	250	235	225	225	210	230	230	240	245	242
24	225	250	235	220	230	250	240	230	235	250	250	250	260	270	270	255	225	230	205	210	225	225	245	260	239
25	270	265	...a	265	...a	230	250	...c	235	250	255	260	265	305	295	265	225	210	215	230	280	270	260	245	...
26	220	235	...a	280	...a	280	240	230	220	240	255	295	270	280	275	250	230	225	230	215	220	240	240	265	...
27	260	...a	...a	255	250	260	...a	245	245	245	245	245	290	260	255	245	240	220	230	215	230	235	250	260	...
28	255	250	250	230	210	245	240	220	210	240	250	245	240	260	260	240	230	220	205	215	245	240	235	290	237
29	265	280	290	270	...a	225	240	230	225	245	250	280	255	230	270	240	240	220	210	220	220	235	230	265	...
30	280	255	240	230	230	255	245	225	235	240	240	240	250	270	260	250	230	215	220	260	240	230	240	260	243
31																									
MEAN*	258	259	264	251	239	254	251	233	240	250	258	269	278	280	276	261	247	230	219	221	233	242	245	259	251

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 93

APRIL 1940 — APRIL 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.3	4.8	4.7	4.9	4.9	5.2	5.1	4.7	4.3	...	...
2	...	...	4.2	4.5	4.7	5.0	4.9	5.4	5.0	4.7	4.3	...	...
3	...	...	4.0	4.2	4.8	5.3	4.7	4.5	4.5	4.3	4.3	...	...
4	...	...	...a	4.4	4.8	4.6	4.6	4.9	...c	...c	...a	...a	...
5	...	...	3.8	4.3	4.6	4.7	4.9	4.9	5.3	4.8	...a	...	...
6	...	...	4.3	4.6	...a	...a	5.3	5.2	4.9	5.4	4.3	...	...
7	...	...	...	4.4	4.7	4.7	...c	5.0	5.5	4.9	4.3	...	...
8	...	...	4.2	4.3	4.7	4.9	4.9	5.1	4.8	5.1	...	...	...
9	...	...	...	...	4.9	4.9	4.7	...	...	...	...	...	...
10	...	...	...	...	4.8	4.7	4.6	...	...	...	...	...	...
11	...	...	...	...	...	4.9	4.8	5.1	4.8	4.5	...	...	...
12	...	...	...	4.9	4.8	4.8	4.6	4.2	4.4	4.9	4.3	...	...
13	...	...	...	...	4.5	4.8	5.4	4.8	4.4	4.1	...	...	...
14	...	...	...	4.5	4.5	4.6	4.7	4.7	4.9	4.5	...	...	...
15	...	...	...	...	...	4.9	4.7	...a	...	...	...	...	...
16	...	...	...	4.3	4.7	4.9	4.8	4.6	4.9	...	...	...	...
17	...	...	...	...	4.8	4.8	5.0	4.8	4.5	...	...	...	...
18	...	...	...	4.8	4.8	5.0	4.8	4.9	5.2	5.2	4.2	...	...
19	...	...	3.9	4.4	4.7	4.9	5.0	5.1	5.1	5.0	4.0	...	...
20	...	...	4.0	4.5	4.9	4.6	5.0	5.1	5.2	4.7	...	...	...
21	...	...	...	4.1	4.7	5.2	5.0	4.9	4.8	4.3	3.5	...	...
22	...	...	4.0	4.6	4.7	4.8	5.4	5.4	4.9	5.0	4.0	...	...
23	...	...	...	...	4.7	4.9	5.2	4.8	4.7	4.5	...	...	...
24	...	...	3.8	4.3	4.9	5.0	5.0	5.2	5.1	4.3	...	...	...
25	...	...	...	4.6	4.6	4.8	4.9	4.8	5.1	4.6	3.5	...	...
26	...	...	4.0	4.3	4.7	5.4	5.0	5.2	4.8	4.4	...	...	...
27	...	...	3.6	4.3	4.8	4.7	5.2	5.1	...a	4.5	...	...	...
28	...	...	3.5	4.1	5.0	4.7	4.5	4.6	4.6	4.4	3.7	...	...
29	...	...	...	4.3	4.4	5.1	4.8	...	4.5	4.3	...	...	...
30	...	...	3.5	4.1	4.7	4.4	4.8	4.8	4.8	4.3	...	...	...
31													
MEAN*	...	...	3.9	4.4	4.7	4.9	4.9	4.9	4.9	4.6	4.1	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	260	240	220	225	220	230	225	230	240	...	...
2	...	...	240	...a	220	215	...a	210	225	...a	230	...	...
3	...	...	240	230	225	...a	215	230	250	230	245	...	...
4	...	...	...a	...a	205	200	200	235	...c	...c	...a	...a	...
5	...	...	225	210	215	205	195	230	240	...a	...a	...	...
6	...	...	220	225	...a	...a	...a	...a	240	240	230	...	...
7	...	...	...	230	...a	200	220	205	230	220	230	...	...
8	...	...	220	215	195	190	185	230	225	220	...	...	...
9	...	...	...	...	210	210	205	...	...	...	...	...	...
10	...	...	...	...	230	210	190	...	...	...	...	...	...
11	...	...	...	...	...	210	190	200	220	230	...	...	...
12	...	...	...	200	235	200	200	200	225	215	240	...	...
13	...	...	...	...	230	215	215	220	200	215	...	...	...
14	...	...	...	240	210	190	190	200	235	240	...	...	...
15	...	...	...	...	...	200	215	...a	...	...	...	...	...
16	...	...	...	215	220	210	200	210	235	...	...	...	...
17	...	...	...	...	200	225	225	225	225	...	...	...	...
18	...	...	...	220	215	210	220	205	230	220	230	...	...
19	...	...	225	225	210	215	200	215	225	230	230	...	...
20	...	...	240	220	200	220	205	200	235	210	...	...	...
21	...	...	...	210	220	215	235	220	210	230	...a	...	...
22	...	...	230	220	230	210	200	210	225	225	235	...	...
23	...	...	...	...	225	220	220	230	...a	...a	...	...	...
24	...	...	225	200	205	200	205	220	225	225	...	...	...
25	...	...	225	220	...a	240	230	220	225	230	220	...	...
26	...	...	225	230	215	220	230	230	220	230	...	...	...
27	...	...	230	225	220	210	190	190	...a	...a	...	...	...
28	...	...	205	200	220	210	200	210	...a	230	225	...	...
29	...	...	...	220	210	200	210	...	230	230	...	...	...
30	...	...	225	225	...c	220	200	210	200	230	...	...	...
31													
MEAN*	...	...	229	220	216	211	208	215	226	226	232	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f°F2 EQUAL TO OR LESS THAN f°F1   h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 94

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1940 APRIL 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	1.2	0.8	1.0	1.0	0.8	1.0	0.8	0.7	0.7	0.6	0.5
2	...	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	...e
3	...	...e	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6
4	...	0.7	0.7	0.7	0.8	0.8	0.9	0.8	p0.9c	p0.9c	0.9	0.8	0.6
5	...	0.6	1.1	1.0	1.2	1.0	0.8	1.0	0.8	0.8	0.7	0.6	...e
6	...	0.5	0.6	0.7	0.8	0.8	0.8	0.7	0.8	1.0	0.7	0.7	...e
7	...	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.7	0.8	0.8	0.6	...e
8	...	0.5	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.5
9	...	0.5	0.7	0.7	0.8	0.8	1.1	1.0	0.9	0.8	0.7	0.7	...e
10	...	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.7	...e
11	...	0.7	0.7	0.7	0.8	1.0	1.0	1.0	0.9	0.8	0.7	0.7	...e
12	...	0.6	0.8	0.7	0.8	0.9	0.9	0.7	0.8	0.8	0.8	0.6	...e
13	...	...e	0.6	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.6
14	...	0.6	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.7	0.6	...e
15	...	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.0	0.8	0.7	0.6
16	...	0.6	0.8	0.7	0.7	0.8	0.7	0.9	1.0	0.8	0.7	0.7	...e
17	...	0.6	0.7	0.8	0.9	1.0	0.8	0.8	0.7	0.8	p0.7c	0.6	...e
18	...	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	1.0	0.7	0.6
19	...	0.5	0.8	0.8	0.8	0.8	0.9	1.0	0.8	0.8	0.7	0.6	...e
20	...	...e	0.5	0.7	0.7	1.0	0.9	0.8	0.8	0.8	0.7	0.6	...e
21	...	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	...e
22	...	0.5	1.0	0.7	1.0	0.8	0.8	0.9	0.8	0.8	0.7	0.7	...e
23	...	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.6	...e
24	...	0.6	0.7	0.8	0.7	0.8	1.0	0.8	0.7	0.7	0.7	0.7	...e
25	...	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	...e
26	...	0.7	0.8	0.6	0.8	0.8	1.4	1.5	1.0	0.8	0.7	0.6	...e
27	...	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.9	0.7	0.6	0.5	p0.6c
28	...	0.5	0.6	0.8	0.6	0.7	0.7	0.7	0.8	0.6	0.6	0.6	...e
29	...	0.7	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...e	...e
30	...	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.6	0.7	0.6	0.5	...e
31													
MEAN*	...	0.6	0.8	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.6	0.5

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.4	2.3	3.0	3.3	3.1	3.3	3.2	3.4	3.2	3.0	2.7	2.5	1.4
2	1.1	1.6	2.6	3.0	3.2	3.3	3.2	3.3	3.4	3.2	2.9	2.3	1.4
3	1.1	1.9	2.8	3.0	3.1	3.2	3.4	3.4	3.2	3.1	2.8	2.3	1.5
4	0.8	2.1	2.7	3.0	3.3	3.5	3.6	3.5	...c	...c	2.9	2.1	1.2
5	1.0	2.2	2.8	3.1	3.4	3.5	3.7	3.6	3.5	3.3	2.9	2.0	1.3
6	1.0	2.1	2.8	3.2	3.5	3.6	3.6	3.5	3.5	3.2	3.0	2.3	0.8
7	1.0	2.1	2.6	2.9	3.2	3.2	3.3	3.3	3.4	3.1	3.0	2.4	...a
8	1.0	1.9	2.7	3.0	3.3	3.5	3.2	3.5	3.4	3.2	2.8	2.2	1.2
9	1.0	2.2	2.8	3.2	3.1	3.3	3.2	3.6	3.5	3.3	2.9	2.1	...a
10	1.0	2.0	2.6	3.0	3.2	3.3	3.6	3.5	3.5	3.2	2.8	2.2	...a
11	0.8	2.0	2.7	3.1	3.3	3.3	3.4	3.5	3.5	3.3	2.9	...a	...a
12	1.0	2.1	2.9	3.1	3.2	3.4	3.5	3.6	3.4	3.2	2.9	2.1	1.4
13	1.1	2.2	2.8	3.0	3.0	3.0	3.2	3.5	3.5	3.2	2.8	2.2	1.1
14	0.9	2.1	2.7	3.0	3.0	3.1	3.3	3.4	3.4	3.3	2.9	2.2	1.1
15	0.8	2.0	2.5	3.1	3.1	3.3	3.5	3.5	3.5	3.3	3.0	2.3	1.1
16	1.0	2.1	2.7	2.6	3.2	3.3	3.4	3.4	3.2	3.2	2.2	2.2	1.1
17	0.9	2.1	2.6	3.1	3.3	3.5	3.5	3.3	3.3	3.0	2.9	2.1	1.1
18	0.8	2.3	2.7	3.0	2.3	3.5	3.5	3.5	3.4	3.2	2.8	2.1	1.2
19	0.9	2.2	2.7	3.1	3.1	3.5	3.5	3.5	3.3	3.2	2.7	2.1	0.8
20	0.8	2.1	2.7	3.1	3.3	3.4	3.4	3.5	3.5	3.2	2.8	2.1	0.8
21	0.8	1.9	2.8	2.9	3.2	3.4	3.3	3.3	3.3	3.0	2.7	2.1	...a
22	0.7	1.9	2.7	3.3	3.3	3.4	3.3	3.3	3.2	3.0	2.7	2.0	...a
23	0.6	1.9	2.6	2.9	3.2	3.1	3.2	3.5	3.3	3.0	2.7	...a	0.8
24	0.7	2.0	2.5	2.8	3.3	3.4	3.3	3.5	3.4	3.1	2.7	2.1	1.0
25	0.8	1.9	2.6	3.0	3.3	3.5	3.5	3.2	3.1	2.7	2.4	2.0	0.8
26	0.8	2.0	2.6	3.0	3.3	3.4	3.6	3.6	3.4	3.1	2.5	2.2	0.7
27	0.7	2.0	2.6	3.0	3.3	3.4	3.4	3.3	3.1	2.7	2.7	1.6	...c
28	0.6	2.0	2.5	3.0	3.0	3.4	3.5	3.4	3.2	3.1	2.7	2.0	1.1
29	...a	1.9	2.5	2.9	3.2	3.3	3.3	3.3	3.3	3.0	2.6	2.0	0.8
30	0.7	2.0	2.5	3.0	3.2	3.2	3.3	3.4	3.3	3.0	2.7	2.0	0.8
31													
MEAN*	0.9	2.0	2.7	3.0	3.2	3.4	3.4	3.4	3.4	3.1	2.8	2.1	1.1

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 95

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1940 MAY 1940

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.0	3.8	3.9	4.2	4.1	3.2	3.0	5.8	7.4	9.3	10.3	11.0	9.7	10.4	10.5	10.9	8.4	7.7	7.4	5.9	4.8	4.1	3.2	3.3	6.5
2	3.5	3.7	3.9	4.3	4.3	3.4	3.5	5.9	7.0	7.7	8.9	9.1	9.8	10.8	11.4	11.1	10.2	9.7	7.8	5.2	4.2	3.5	3.1	3.3	6.5
3	3.6	3.9	4.2	4.3	4.3	4.2	3.1	5.5	7.2	...c	...c	...c	8.5	9.3	10.1	9.8	8.8	8.1	6.6	4.8	3.7	3.7	3.2	3.3	...
4	3.4	3.3	3.5	3.7	3.6	3.2	3.2	5.9	7.2	7.6	9.0	10.2	9.4	9.2	9.0	9.9	9.2	7.5	5.7	4.7	3.5	2.9	2.9	3.2	5.9
5	3.7	3.7	3.6	3.8	3.6	3.1	3.0	5.6	p6.7c	7.8	9.6	10.0	9.3	9.9	9.6	9.1	9.0	9.0	6.1	3.9	3.9	3.4	3.2	3.0	6.0
6	3.0	3.2	3.2	4.0	4.2	3.7	3.0	5.5	6.9	p7.6c	8.3	8.6	9.0	9.2	9.8	10.3	8.9	9.0	7.8	4.3	p3.5a	2.6	2.9	3.2	5.9
7	3.3	3.2	3.3	3.4	3.4	3.4	3.0	5.3	7.2	7.5	8.4	9.3	8.8	9.0	8.6	9.0	8.2	8.2	7.3	5.2	3.9	3.5	3.2	3.3	5.8
8	3.3	3.6	4.0	4.2	3.8	3.6	2.9	5.2	6.9	7.9	8.5	8.9	10.0	9.5	10.0	10.8	8.8	7.6	6.2	4.5	3.8	3.2	3.1	3.4	6.0
9	3.5	3.7	3.7	4.1	4.3	3.6	3.2	5.4	6.8	8.3	8.5	9.0	8.5	...c	...c	...c	...c	9.5	6.6	4.2	3.6	3.4	3.4	3.6	...
10	3.7	3.9	4.0	4.3	3.7	3.3	3.3	5.7	7.2	7.3	8.0	9.0	7.9	9.2	9.8	10.0	10.0	9.9	7.8	4.8	3.6	3.3	2.8	3.1	6.1
11	3.3	3.5	3.8	4.2	3.8	4.3	3.0	6.0	7.3	7.8	8.7	9.7	9.7	9.4	10.9	10.6	10.1	9.2	6.9	5.2	4.3	3.7	3.6	3.8	6.4
12	3.7	3.9	3.7	4.0	3.9	4.1	3.1	5.8	7.5	8.7	9.3	9.1	9.1	9.2	9.2	9.5	10.5	9.5	6.7	4.4	3.7	3.4	4.1	4.3	6.3
13	4.8	5.0	5.0	5.3	4.1	3.1	2.6	5.2	6.8	8.3	9.6	10.1	9.0	9.2	9.2	9.1	8.3	8.8	6.5	3.7	4.0	3.4	3.3	3.6	6.2
14	3.5	3.7	3.8	4.0	4.3	2.9	2.6	5.3	p7.0c	9.0	8.5	9.4	8.9	8.9	10.0	9.6	9.3	8.3	6.8	4.8	4.1	3.1	3.0	3.5	6.0
15	3.3	3.7	4.1	4.3	4.4	4.3	3.8	5.3	7.5	8.6	8.4	9.0	8.8	9.2	9.2	9.9	9.9	8.1	6.4	4.2	3.0	3.1	3.1	p3.2f	6.0
16	3.3	3.2	3.4	3.2	3.5	2.5	2.7	5.5	8.2	9.0	9.0	9.4	9.5	10.3	10.5	9.8	9.1	7.3	6.7	5.4	3.6	2.9	3.3	3.1	6.0
17	3.4	3.3	3.4	4.0	3.6	2.7	2.5	5.3	7.6	8.2	8.5	9.5	8.3	9.6	9.8	9.7	8.8	7.8	6.1	4.0	3.5	3.5	3.4	3.8	5.8
18	3.8	4.3	4.5	3.8	3.5	3.1	3.2	5.2	7.8	9.1	8.6	9.1	9.6	10.3	11.1	10.8	10.5	8.7	7.5	4.2	4.2	4.2	4.3	3.9	6.5
19	4.0	4.0	3.6	3.6	3.2	2.9	3.2	4.7	6.5	8.7	9.7	9.6	8.8	8.5	9.0	8.7	8.4	8.5	6.5	5.1	3.6	3.0	2.8	2.8	5.8
20	2.8	3.2	3.6	3.8	3.7	3.0	3.0	5.0	7.5	9.3	10.3	9.2	9.4	8.6	8.2	9.7	9.4	7.5	6.5	3.5	3.0	3.5	3.7	3.5	5.9
21	3.6	3.7	3.7	4.0	4.6	3.2	2.8	5.2	7.9	9.8	10.0	10.4	8.2	9.0	9.7	9.9	9.2	8.4	5.6	4.4	3.4	3.3	3.4	3.2	6.1
22	2.9	2.5	2.8	2.8	3.0	2.9	2.7	5.0	7.3	8.0	8.3	9.3	8.0	9.7	10.6	10.6	11.0	9.6	6.6	3.8	3.5	3.3	3.4	3.6	5.9
23	4.0	3.6	2.8	3.1	3.3	3.1	3.0	5.1	7.7	9.0	9.4	8.6	9.0	10.0	10.3	9.4	9.0	7.2	5.5	4.6	3.6	2.5	2.6	3.2	5.8
24	3.1	3.5	3.5	3.2	3.2	3.2	3.2	4.8	7.8	7.9	8.9	9.7	9.3	10.1	10.8	12.4	11.8	9.4	7.0	5.5	4.1	4.7	5.0	5.1	6.6
25	4.1	3.7	3.6	3.6	3.7	3.5	3.2	5.5	7.4	7.9	8.3	9.1	8.9	9.7	10.7	9.5	8.0	6.7	6.4	3.5	2.7	2.4	2.4	2.8	5.7
26	2.5	2.8	2.9	3.0	2.9	2.7	2.7	5.2	6.4	7.5	8.2	8.4	8.6	9.3	9.2	10.3	10.0	8.6	6.2	3.8	3.2	2.8	3.3	3.2	5.6
27	3.5	3.6	3.2	3.6	3.7	3.5	4.2	5.1	6.6	8.3	7.1	9.2	9.5	9.7	9.5	9.7	8.4	8.9	6.8	4.8	3.6	3.0	2.9	2.5	5.9
28	2.8	3.1	3.5	3.8	3.7	3.0	1.8	4.2	7.3	8.2	8.1	9.3	8.4	8.0	8.4	10.3	9.0	7.7	5.7	4.9	3.4	2.7	2.7	2.5	5.5
29	2.6	2.8	3.0	3.0	3.3	2.3	2.3	4.7	7.0	7.4	9.6	9.5	10.2	8.4	8.8	8.4	7.7	7.5	5.0	3.6	3.0	3.0	2.7	3.1	5.4
30	3.0	3.3	3.6	3.7	3.7	2.9	2.8	4.3	7.2	8.4	8.2	8.1	8.7	7.8	7.5	8.3	6.5	7.8	4.2	3.0	2.8	3.4	3.2	2.8	5.2
31	3.2	3.7	3.8	3.8	3.8	3.5	3.4	5.0	7.1	7.7	8.6	8.0	9.1	8.9	8.4	8.9	8.3	7.3	4.9	3.7	3.4	3.1	2.9	2.9	5.6
MEAN*	3.4	3.6	3.6	3.8	3.8	3.3	3.0	5.3	7.2	8.3	8.8	9.3	9.0	9.3	9.7	9.9	9.2	8.4	6.4	4.4	3.6	3.3	3.2	3.3	6.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 96

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MAY 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	275	p260a	245	260	260	230	235	230	230	260	245	245	290	270	270	245	230	215	220	225	230	230	240	270	246
2	285	280	270	250	225	250	220	215	220	250	250	280	260	295	290	245	240	230	235	230	235	240	250	280	251
3	265	270	250	250	230	220	215	220	225	...c	...c	...c	250	300	250	240	240	220	220	210	245	230	230	260	...
4	245	260	260	230	235	250	235	230	220	220	270	260	250	270	270	260	240	215	215	240	240	255	240	240	244
5	p240a	230	270	250	235	260	220	220	220	260	265	260	260	260	250	250	250	230	220	p230a	p240a	260	260	240	245
6	205	215	p240a	265	270	245	210	220	220	p240c	250	250	290	260	270	245	230	225	215	210	...a	...a	...a	...a	...
7	...a	240	235	265	255	240	230	230	225	235	250	250	245	275	250	250	240	235	240	p250a	260	245	270	260	...
8	275	280	265	250	245	230	230	225	225	250	270	255	260	250	275	260	230	220	215	220	230	235	265	260	247
9	280	270	250	265	235	220	230	240	225	245	240	240	310	...c	...c	...c	...c	220	210	225	250	250	280	270	...
10	270	260	235	240	230	230	235	220	215	270	250	250	260	290	270	250	230	225	220	215	235	240	250	280	245
11	280	270	285	270	280	220	210	230	230	235	280	270	270	270	270	245	240	215	215	215	230	230	240	240	248
12	260	260	265	250	235	220	200	215	225	245	270	260	280	270	250	260	240	220	200	210	215	260	290	275	245
13	265	265	250	220	215	200	260	235	225	270	250	250	260	270	260	250	p240a	230	210	240	240	250	260	265	245
14	240	260	235	220	230	210	200	225	p240c	245	260	270	290	280	260	240	230	215	210	235	210	240	280	250	241
15	240	250	240	235	230	225	220	260	220	235	240	235	260	270	255	250	230	210	210	210	250	265	285	260	241
16	260	280	260	250	230	240	265	225	240	235	250	230	230	260	260	250	235	210	250	205	225	240	250	250	243
17	250	270	250	260	220	230	240	230	230	240	260	250	250	285	260	250	230	220	200	200	235	240	280	260	243
18	260	250	240	230	210	200	235	220	240	250	250	260	290	280	270	265	230	245	200	240	270	270	250	265	247
19	270	250	235	250	210	260	230	235	240	260	230	240	260	270	270	240	230	220	200	200	200	260	230	240	239
20	250	295	260	245	230	235	245	230	240	235	250	240	285	260	260	260	235	220	205	215	275	260	270	290	250
21	255	270	260	230	235	p250a	265	235	240	250	235	240	230	310	270	245	235	230	p230a	240	p250a	260	240	p240a	248
22	250	270	260	250	270	225	235	220	220	240	250	270	290	300	270	260	250	240	200	280	235	260	270	280	254
23	245	240	245	260	240	220	220	230	245	240	245	260	280	260	270	250	230	210	210	245	220	215	275	275	243
24	250	250	250	220	250	230	260	230	235	235	245	290	260	285	275	260	215	205	265	245	310	305	280	260	255
25	220	240	280	265	270	235	235	240	220	220	235	250	260	270	270	230	220	220	210	215	240	250	260	250	242
26	280	290	275	250	240	250	245	230	220	235	250	270	270	270	260	270	220	210	200	260	240	260	275	280	252
27	270	270	250	270	250	260	225	215	210	240	245	255	265	270	270	260	235	230	210	220	230	230	230	290	246
28	290	270	260	240	210	200	250	230	230	235	240	250	265	240	260	260	240	220	220	220	210	275	275	250	243
29	285	290	260	260	230	215	250	230	230	245	260	260	260	235	250	235	245	220	200	245	215	250	275	260	246
30	265	260	250	230	240	190	240	220	235	240	250	250	250	250	250	250	230	220	200	210	260	240	235	250	238
31	270	260	235	240	220	240	210	225	220	210	265	245	270	260	250	250	230	220	195	220	220	215	220	255	235
MEAN*	260	262	254	247	238	230	232	228	228	242	252	254	266	271	263	251	234	222	215	227	238	249	258	261	245

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 97

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1940 MAY 1940

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION													MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.2	4.4	4.7	5.1	4.9	4.6	4.3	3.5	...	...	...	...	...	220	215	220	...a	...a	200	235	225	...	...
2	...	...	...	3.8	4.5	4.6	4.9	4.9	4.8	4.2	3.2	...	...	...	...	...	215	210	210	215	230	230	250	225	...	...
3	...	...	...	...c	...c	...c	4.8	5.0	4.8	...a	...	...	...	...	...	...	...c	...c	...c	210	220	260	...a	...	...	...
4	...	...	...	...	...	4.5	4.5	4.4	4.3	4.2	...	...	...	...	...	...	...	...	220	240	225	215	235	...	...	...
5	...	...	...	4.2	4.8	4.8	4.8	4.7	4.5	...a	...	...	...	...	...	...	230	225	225	220	240	...a	...a	...	...	...
6	...	...	...	...	4.3	4.6	5.0	4.7	4.3	4.2	3.5	...	...	...	...	...	...	220	215	220	220	240	230	220	...	...
7	...	...	...	4.0	4.6	4.6	4.7	4.7	...a	4.2	...	...	...	...	...	...	235	235	250	235	235	...a	210	...	...	...
8	...	...	...	4.2	4.3	4.8	4.8	4.8	4.7	4.3	...	...	...	...	...	...	230	215	215	220	235	220	240	...	...	...
9	...	...	...	4.2	4.3	4.6	5.0	...c	...c	...c	...	...	...	...	...	...	230	215	220	210	...c	...c	...c	...c	...	...
10	...	...	...	4.2	4.4	4.3	4.7	5.0	4.9	4.2	...	...	...	...	...	...	250	230	...a	200	230	240	225	...	...	...
11	...	...	...	4.1	4.8	4.6	4.4	4.5	4.4	4.1	3.4	...	...	...	...	...	230	200	...a	225	250	200	235	210	...	...
12	...	...	...	4.1	4.4	4.6	5.0	4.6	4.4	4.2	3.9	...	...	...	...	...	225	...a	210	220	235	220	220	235	...	...
13	...	...	...	4.3	4.5	4.5	4.4	4.9	4.3	4.2	...a	...	...	...	...	...	240	235	230	210	210	220	235	...a	...	...
14	...	...	...	4.4	4.7	4.8	5.1	4.5	4.4	...	...	...	...	...	...	...	210	200	220	200	230	230	...	...	...	...
15	...	...	...	3.5	4.2	4.3	...c	4.6	5.0	4.5	4.0	...	...	...	...	...	230	225	210	210	200	230	230	225	...	...
16	...	...	...	3.7	4.4	4.6	4.7	5.4	4.2	4.2	...	...	...	...	...	...	225	210	...a	...a	235	200	220	...	...	...
17	...	...	...	4.3	4.6	4.6	4.7	5.2	5.0	4.3	3.5	...	...	...	...	...	225	200	220	210	220	220	225	225	...	...
18	...	...	...	4.0	4.3	4.8	5.0	4.5	4.6	4.5	3.4	...	...	...	...	...	240	220	230	220	225	220	240	225	...	...
19	...	...	...	...	4.4	4.8	5.0	4.9	4.9	4.1	3.8	...	...	...	...	...	...	235	235	200	220	235	235	220	...	...
20	...	...	...	4.0	4.5	4.7	4.5	4.4	4.3	4.3	...	...	...	...	...	...	230	235	225	200	230	220	230	...	...	...
21	...	...	3.6	4.2	4.3	4.9	5.0	4.9	4.7	4.3	...	...	...	...	...	230	240	...a	225	200	210	245	230	...	...	...
22	...	...	...	4.2	4.7	4.9	4.7	4.9	4.5	4.1	3.6	...	...	...	...	...	235	235	230	200	220	250	240	250	...	...
23	...	...	...	...	...	4.5	4.8	4.2	4.8	4.2	...	...	...	...	...	...	...	...	225	220	210	230	225	...	...	...
24	...	...	...	...	4.4	4.8	4.5	...a	...a	4.2	...	...	...	...	...	...	...	240	220	240	...a	...a	245	...	...	...
25	...	...	...	...	...	4.6	4.5	4.7	4.6	4.1	...	...	...	...	...	...	...	...	220	210	...a	210	230	...	...	...
26	...	...	...	...	4.7	4.9	4.9	4.7	4.4	4.5	...	...	...	...	...	...	...	220	220	230	215	200	200	...	...	...
27	...	...	...	...	4.3	4.3	...	4.8	4.6	4.3	...	...	...	...	...	...	...	210	200	...	250	225	225	...	...	...
28	...	...	...	3.9	4.8	4.5	4.5	4.3	4.1	4.2	...	...	...	...	...	...	220	240	210	230	210	235	250	...	...	...
29	...	...	...	4.0	4.7	4.8	4.8	4.4	3.6	...	...	...	...	...	...	...	220	250	230	230	220	220	...	...	...	...
30	...	...	...	4.3	4.5	4.3	4.7	4.5	4.4	4.1	3.2	...	...	...	...	...	230	225	230	240	220	225	230	220	...	...
31	...	...	...	...	4.8	4.5	4.5	4.3	4.5	4.0	...	...	...	...	...	...	...	230	230	220	220	210	210	...	...	...
* MEAN	...	...	3.6	4.1	4.5	4.6	4.8	4.7	4.5	4.2	3.6	...	...	...	...	230	229	223	222	217	225	224	230	225	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 98

MAY 1940 MAY 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.7	0.7	1.0	0.6	0.7	0.6	0.7	0.6	0.6	0.6	...e
2	...	...e	0.5	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	...e
3	...	0.6	0.7	...c	...c	...c	0.7	0.8	0.8	0.6	0.6	0.6	0.7
4	...	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...e
5	...	0.5	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	...e
6	...	0.6	0.6	p0.7c	0.7	0.8	0.7	0.7	0.7	0.6	0.7	0.6	0.6
7	...	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.8	0.7
8	...	0.5	0.8	0.7	0.9	0.7	0.8	0.6	0.7	0.7	0.7	0.6	0.8
9	...	0.6	0.8	0.8	0.7	0.7	0.8	...c	...c	...c	...c	0.8	0.6
10	...	0.7	0.7	0.8	0.7	0.8	1.0	0.8	0.9	0.8	0.8	0.9	0.9
11	...	0.7	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.1	0.9	0.9	0.7
12	...	0.6	0.7	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.6
13	...	0.6	0.8	0.8	1.0	1.0	0.8	0.7	0.8	0.8	0.7	0.5	0.6
14	...	...e	p0.6c	0.6	0.6	1.0	0.7	0.7	0.7	0.7	0.7	...e	...e
15	...	...e	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...e
16	...	...e	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.6	...e
17	...	0.6	0.7	0.7	0.7	0.9	0.8	0.6	0.7	0.6	0.7	0.7	...e
18	...	0.5	0.7	0.7	0.8	0.8	0.7	1.0	0.7	0.7	0.6	0.6	...e
19	...	...e	0.8	1.2	1.0	0.9	0.8	0.7	0.8	0.7	0.7	0.7	...e
20	...	...e	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	...e
21	...	...e	0.6	0.7	0.9	0.7	0.8	0.8	0.7	0.8	0.6	0.6	...e
22	...	0.5	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.8	...e
23	...	0.6	0.7	0.8	0.9	0.8	0.9	0.7	0.8	0.8	0.7	0.7	0.5
24	...	0.5	0.7	0.8	0.9	0.8	1.0	0.8	0.8	0.7	0.6	0.8	0.6
25	...	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7
26	...	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.6
27	...	0.5	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.6	0.6	...e
28	...	0.5	0.7	0.7	0.8	0.6	0.7	0.9	0.8	0.7	0.8	0.7	0.7
29	...	0.6	0.7	0.8	0.9	0.8	0.7	0.7	0.7	0.7	1.0	0.7	0.6
30	...	0.7	0.8	0.8	p0.8c	0.8	0.8	0.7	0.7	0.8	0.8	0.7	...e
31	...	0.6	0.9	0.7	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.6	...e
MEAN*	...	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.8	2.0	2.6	3.1	3.1	3.3	3.4a	3.4	3.2	3.0	2.6	2.0	1.1
2	0.8	1.9	2.5	2.8	3.1	3.3	3.5	3.4	3.2	2.9	2.5	2.0	0.8
3	0.9	1.8	2.4	...c	...c	...c	3.4	3.3	3.6	3.1a	2.6	2.1	1.0a
4	0.9	2.0	2.4	2.8	3.1	3.2	3.2	3.3	3.3	3.0	2.6	1.9	1.5
5	0.8	1.9	2.5	3.0	3.1	3.3	3.3	3.3	2.9	2.7a	2.4	1.9	...a
6	1.0a	2.0	2.6	p2.9	3.2	3.3	3.3	3.3	3.1	3.0	2.6	2.0	1.6
7	1.1	1.6	2.4	3.1	3.3	3.4	3.5	3.3	3.2	3.1	3.2	...a	...a
8	1.0	1.6	2.4	3.0	3.1	3.2	3.1	3.0	3.2	2.9	2.6	1.9	1.4
9	0.9	1.5	2.3	3.0	3.2	3.3	3.4	...c	...c	...c	...c	1.8	1.1
10	0.9	1.8	2.4	3.2	3.2	3.2	3.3	3.3	2.8	3.0	2.5	1.8	1.7
11	1.1	1.7	2.4	2.7	3.0	3.2	3.4	3.5	3.2	3.0	2.5	1.9	0.9
12	0.8	1.9	2.5	2.9	3.1	3.3	3.3	3.3	3.2	3.0	2.2	1.8	1.0
13	1.0	1.9	2.4	2.8	3.1	3.2	3.4	3.3	3.2	3.0	p2.3	1.6	1.0
14	0.6	1.9	p2.4c	2.9	3.2	3.3	3.0	3.0	3.1	3.0	2.4	2.0	1.0
15	...a	2.0	2.4	3.0	3.1	3.2	3.3	3.3	3.0	3.0	2.4	1.8	0.7
16	0.8	1.9	2.5	2.8	3.1	3.4	3.3	3.3	3.2	3.1	2.8	1.9	p1.0c
17	0.7	1.9	2.4	3.0	3.2	3.3	3.3	3.3	3.2	3.0	2.7	1.9	0.8
18	0.8	1.9	2.6	2.9	3.2	3.3	3.4	3.3	3.1	2.9	2.5	1.7	0.8
19	...e	1.9	2.6	3.1	3.2	3.3	3.4	3.4	3.2	2.9	2.5	1.8	0.8
20	0.7	2.0	2.8	3.0	3.1	3.3	3.3	3.3	3.2	3.0	2.5	1.7	0.8
21	0.8	1.9	2.5	p3.0a	3.2	3.3	3.4	3.4	3.2	3.0	2.4	1.6	...a
22	0.7	1.9	2.5	3.2	3.3	3.3	3.4	3.3	3.2	2.9	2.5	1.6	1.0a
23	0.8	2.0	2.7	3.0	3.2	3.2	3.3	3.3	3.3	3.0	2.5	1.9	1.0
24	0.8	1.8	2.5	3.0	3.3	3.4	3.4	3.3	3.1a	3.0	2.5	p1.8a	1.1
25	1.2	1.8	2.3	2.8	3.0	3.2	3.0	3.0	3.0	2.8	2.3	1.8	p1.1e
26	0.8	1.8	2.5	2.9	3.0	3.2	3.0	3.2	3.1	2.8	2.3	1.7	p1.1a
27	0.8	1.7	2.3	2.6	3.0	3.2	3.3	3.2	3.1	2.9	2.4	1.7	p1.1a
28	0.8	1.9	2.5	2.8	3.0	3.1	3.1	3.2	3.2	2.9	2.4	1.8	1.2
29	p1.0f	1.7	2.4	2.7	3.0	3.1	3.0	3.1	3.0	2.8	2.4	1.8	p1.1a
30	0.8	1.8	2.3	3.0	3.1	3.2	3.3	3.3	3.3	2.9	2.5	1.9	0.8
31	...e	1.8	2.5	2.9	3.2	3.3	3.3	3.2	3.0	2.9	2.5	1.7	0.8
MEAN*	0.8	1.8	2.5	2.9	3.1	3.3	3.3	3.3	3.2	3.0	2.5	1.8	1.0

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 99

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1940 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND JUNE 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	3.4	3.6	3.5	3.4	3.6	3.6	5.0	6.4	7.6	8.0	9.1	8.2	7.6	7.9	7.5	9.2	6.9	5.8	3.3	2.7	3.0	3.5	3.6	5.4
2	3.8	4.1	4.2	3.6	4.0	3.8	4.0	5.3	6.7	7.6	8.2	7.9	8.4	8.1	9.5	9.6	9.5	7.3	4.2	4.3	3.5	4.1	4.2	4.3	5.8
3	5.0	5.1	4.6	4.7	4.4	4.1	4.1	5.3	7.0	8.7	9.0	8.2	8.0	8.4	8.5	7.1	8.0	7.2	4.6	3.0	3.6	3.5	3.6	3.6	5.8
4	3.5	3.8	3.7	3.3	3.4	3.2	3.0	4.4	6.1	7.1	7.3	8.3	7.8	8.0	8.6	8.4	7.7	6.5	4.0	3.8	3.6	3.3	2.8	3.7	5.2
5	3.7	3.9	4.1	4.2	4.1	3.5	3.0	4.9	6.2	7.7	7.4	7.0	6.9	7.8	9.0	8.1	9.0	7.6	5.3	3.5	2.5	2.9	2.9	2.8	5.3
6	2.7	2.9	3.1	3.0	3.2	2.8	3.0	4.8	6.7	7.0	7.4	8.8	9.4	8.9	10.2	10.3	10.6	7.9	6.3	3.8	3.6	3.4	3.4	3.5	5.8
7	3.6	3.2	3.7	3.8	3.6	3.4	2.0	5.0	6.6	7.4	9.2	9.0	10.2	10.1	11.1	10.5	9.6	7.4	5.1	4.7	3.9	3.6	3.6	4.0	6.0
8	3.9	4.0	4.1	3.9	4.1	3.7	2.8	4.3	6.1	7.0	7.2	8.8	9.4	7.7	9.5	8.6	7.3	7.8	5.4	4.0	3.0	2.2	2.0	2.0	6.4
9	2.4	2.5	2.7	2.8	3.0	2.3	2.2	4.3	6.6	7.2	7.5	6.6	8.1	7.4	8.0	9.2	8.8	7.4	5.0	3.5	2.6	2.6	3.3	2.6	4.9
10	3.5	3.5	3.5	3.6	3.5	3.2	2.8	4.5	6.0	7.4	7.4	7.3	8.4	8.0	...c	...c	...c	7.8	5.0	3.3	2.7	2.7	3.2	2.6	...
11	2.8	3.0	3.3	3.2	3.5	3.1	2.7	4.5	6.2	6.7	7.2	7.1	7.3	7.7	7.8	8.0	7.2	8.0	5.9	4.0	3.8	3.0	2.8	2.7	5.1
12	3.0	3.3	3.5	3.6	4.0	3.6	2.7	4.3	6.5	6.8	7.4	7.3	7.7	7.6	7.6	7.3	8.1	8.3	7.4	4.3	3.3	3.3	2.9	3.2	5.3
13	3.3	3.6	3.9	4.6	4.0	4.2	4.1	4.3	6.2	6.7	8.2	8.6	8.5	7.4	7.0	7.6	7.4	7.3	6.0	4.2	3.2	3.0	3.0	3.0	5.4
14	3.1	3.3	3.3	3.6	3.6	3.6	4.0	5.0	7.2	7.0	7.2	8.0	7.7	7.6	7.0	8.6	8.0	6.9	6.1	5.0	5.2	3.5	3.5	3.6	5.5
15	3.8	4.0	4.5	4.1	4.1	4.0	2.9	5.2	6.8	9.8	8.0	10.3	9.3	9.9	8.8	10.1	10.3	9.5	6.6	5.0	4.0	3.0	3.3	3.8	6.3
16	3.0	2.9	3.4	3.4	3.6	3.6	3.1	4.6	7.3	8.0	8.7	8.5	9.4	8.7	8.4	8.0	8.4	6.7	5.0	5.0	3.6	2.6	...c	...c	...
17	...c	...c	...c	2.6	2.7	2.7	2.6	4.2	6.2	7.3	7.5	7.0	7.4	7.8	p8.0	8.1	7.6	7.7	5.4	3.6	2.1	2.4	2.9	3.0	...
18	3.1	3.7	3.7	3.1	3.0	2.4	2.5	4.6	6.2	6.8	6.8	8.0	8.0	8.1	7.9	9.2	9.3	8.0	4.9	3.0	2.4	2.6	2.4	2.6	5.1
19	2.8	2.9	3.4	3.0	3.1	2.6	2.6	3.7	6.5	7.0	7.6	7.3	7.7	7.6	8.0	8.7	9.5	6.8	4.2	2.7	2.5	2.6	3.3	3.6	5.0
20	3.5	3.3	3.4	3.1	3.1	2.6	2.6	4.3	6.9	8.2	8.0	9.6	9.3	7.0	p7.6a	8.6	7.3	8.3	4.3	2.9	2.9	2.5	2.5	2.5	5.2
21	2.6	2.7	3.0	2.8	2.8	2.8	2.7	4.3	6.2	7.2	8.2	6.8	8.7	7.5	7.0	8.4	8.3	7.5	5.6	2.6	2.5	2.7	2.7	2.7	4.9
22	2.7	3.1	3.4	3.6	3.7	3.3	3.1	3.6	5.9	6.2	6.6	7.0	7.3	7.4	7.3	7.9	7.8	7.0	4.7	3.1	2.7	3.3	3.4	3.4	4.9
23	3.5	3.7	3.3	3.6	3.8	3.7	3.7	4.0	6.6	6.6	7.2	7.5	8.1	7.5	8.3	7.9	7.9	7.3	5.7	4.4	4.5	3.1	3.0	2.9	5.3
24	3.1	3.3	3.5	3.4	3.5	3.6	3.1	3.7	6.2	7.5	8.1	7.8	7.5	8.2	7.6	8.7	9.4	8.0	5.8	3.9	3.7	3.5	3.1	3.5	5.4
25	3.6	3.9	4.0	3.8	3.9	3.2	2.8	4.4	6.5	7.4	9.3	8.5	8.2	7.9	9.0	11.0	9.5	7.5	6.7	5.7	3.0	3.6	3.3	2.7	5.8
26	2.9	3.5	2.8	1.8	2.0	2.1	2.4	4.5	6.8	7.0	7.3	7.8	7.7	9.1	7.5	7.8	7.2	7.0	6.4	5.0	3.8	3.0	3.3	3.0	5.1
27	2.9	3.3	3.2	3.3	3.4	3.6	3.3	4.3	7.4	8.3	8.1	p9.3	p8.8	8.3	9.9	8.4	8.3	7.7	6.7	4.6	3.1	2.7	2.6	2.5	5.6
28	2.4	2.4	3.0	3.0	3.4	3.1	2.8	4.1	7.0	8.4	8.0	7.8	8.4	9.4	8.9	7.9	8.3	8.2	5.1	3.7	3.0	2.4	2.4	2.5	5.2
29	2.5	2.6	2.8	3.0	3.2	3.0	3.2	4.2	5.9	7.2	8.2	7.3	9.1	8.4	7.8	7.4	7.7	6.5	5.1	3.3	3.3	2.7	3.0	3.0	5.0
30	3.1	3.3	3.3	3.3	3.4	3.3	3.2	4.4	6.7	7.2	7.7	7.3	8.0	8.2	8.9	8.4	7.2	6.2	5.3	3.8	4.0	3.3	3.0	3.0	5.2
31																									
MEAN*	3.2	3.4	3.5	3.4	3.5	3.3	3.0	4.5	6.5	7.4	7.9	8.0	8.3	8.1	8.4	8.5	8.4	7.5	5.4	3.9	3.3	3.0	3.1	3.1	5.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 100

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	255	240	220	230	225	230	220	220	245	260	245	250	240	255	250	230	200	210	200	200	240	235	250	233
2	255	245	220	220	235	255	240	230	225	235	250	250	250	250	280	250	225	210	200	210	250	240	270	250	239
3	250	230	220	210	230	240	230	220	220	250	250	245	240	250	230	235	240	220	200	260	265	260	250	265	238
4	280	225	225	220	245	230	205	215	220	235	250	260	255	265	260	250	230	210	225	210	225	240	255	240	236
5	240	250	230	220	210	205	230	225	225	245	245	245	260	300	265	265	240	215	215	200	240	260	250	250	239
6	265	255	265	240	245	260	245	240	235	250	250	270	260	310	280	265	230	220	200	270	260	235	260	...a	...
7	...a	...a	290	240	240	210	p220	230	240	260	240	270	320	270	270	240	240	210	235	220	220	245	225	235	...
8	225	220	230	225	230	200	240	220	225	235	250	275	265	270	255	250	245	235	195	230	220	p235a	250	p270a	237
9	290	265	290	260	265	p250a	p230a	200	225	235	255	280	270	285	270	270	230	215	220	225	250	295	260	245	253
10	240	250	265	275	255	220	220	220	225	250	250	255	280	255	...c	...c	...c	220	235	230	260	290	285	290	...
11	310	290	250	260	270	280	270	255	215	225	250	260	265	275	265	250	235	245	220	250	220	225	240	250	253
12	260	270	270	270	250	215	225	225	230	225	230	240	270	265	270	300	245	225	215	200	210	260	280	280	239
13	280	290	260	255	270	260	240	220	230	235	260	275	275	270	275	270	255	220	p215a	210	240	260	p250a	240	252
14	250	245	250	245	255	255	230	220	230	220	235	265	265	300	270	280	245	225	275	300	p290a	p280a	275	270	257
15	290	285	275	235	250	210	p220	230	225	240	280	250	265	270	280	275	240	215	215	220	215	p250a	300	240	249
16	215	270	275	260	225	265	230	240	235	225	250	255	240	245	245	250	235	240	250	250	220	235	...c	...c	...
17	...c	...c	...c	280	270	240	250	225	235	235	245	245	250	270	p260c	250	245	220	220	205	p240a	p285a	290	270	...
18	255	260	220	220	235	280	270	225	230	235	235	250	260	255	240	280	225	230	215	250	290	...a	...a	...a	...
19	...a	260	240	220	250	p295	p300	240	220	225	235	240	295	260	250	235	225	185	...a	...a	...a	...a	...a	250	...
20	230	240	235	p240a	250	p255a	260	240	225	250	245	230	270	p260a	p250a	245	p240a	240	p230a	220	235	p260a	280	280	246
21	290	270	245	240	270	260	235	235	220	230	240	250	265	240	p250a	260	235	215	...c	...a	...a	...a	245	250	...
22	270	285	245	275	225	255	210	225	225	230	255	250	230	250	250	280	235	230	210	210	p225a	235	265	245	242
23	275	260	275	270	265	235	245	225	225	230	260	260	260	255	300	245	270	240	225	210	245	270	265	290	254
24	300	285	275	270	255	225	215	215	220	240	240	250	250	300	255	245	230	230	210	240	230	245	265	p280a	249
25	290	280	275	250	225	260	260	235	230	270	250	240	295	330	290	245	235	230	220	240	370	315	360	405	275
26	435	270	245	250	430	390	325	395	235	245	275	270	275	260	250	250	240	235	225	240	230	260	265	260	281
27	p255c	250	280	260	260	250	235	225	230	230	260	p255	p265	295	260	240	240	230	215	210	...c	...a	...a	...a	...
28	...a	...a	230	240	235	230	220	230	225	235	245	245	230	245	275	270	235	220	220	260	220	230	230	255	...
29	230	270	270	265	250	230	p225c	220	215	235	250	255	260	260	275	280	235	230	215	215	240	270	p270c	270	247
30	260	270	245	260	255	255	230	230	220	240	250	260	290	270	285	235	240	220	220	240	235	230	245	240	247
31																									
*MEAN	269	261	253	246	253	248	239	232	226	238	250	255	264	269	264	257	238	223	220	229	242	256	264	264	248

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 101

JUNE 1940 JUNE 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	3.9	4.5	4.5	4.7	4.3	4.5	3.8	3.5	...	...
2	...	...	3.2	4.0	4.5	4.5	4.7	4.5	4.9	4.4	3.3	...	...
3	...	...	...	3.9	5.0	4.6	4.4	4.5	4.3	4.0	3.8	...	...
4	...	...	...	4.0	4.4	4.5	4.6	4.6	4.3	3.9	3.3	...	...
5	...	...	...	4.2	4.2	4.5	4.5	5.0	4.7	4.2	3.4	...	...
6	...	...	...	3.6	4.4	4.4	4.8	5.6	4.7	4.2	3.3	...	...
7	...	...	...	4.4	4.3	5.3	5.6	...a	...a	3.9	...a	...	...
8	...	...	...	4.3	4.3	4.8	4.8	4.8	...a	...a	...a	...	...
9	...	...	...	3.6	4.2	4.4	5.0	4.5	4.7	4.5	3.4	...	...
10	...	...	...	4.0	4.4	4.4	4.7	4.7	...c	...c	...c	...	...
11	...	...	...	4.0	4.3	4.4	4.6	4.6	4.4	4.0	...	...	...
12	...	...	3.6	3.6	4.0	4.4	4.8	4.8	4.4	4.3	...	...	...
13	...	...	...	...	4.5	5.0	4.8	4.9	5.3	4.7	...	...	...
14	...	...	...	3.5	4.3	4.7	4.8	5.1	4.3	4.4	...	...	...
15	...	...	...	4.0	4.0	4.8	4.8	4.8	4.6	4.5	3.2	...	...
16	...	...	...	3.9	4.2	4.8	4.4	4.4	4.5	4.3	3.5	...	...
17	...	...	...	4.0	4.5	4.5	4.4	4.8	4.5	4.2	3.9	...	...
18	...	...	...	4.0	4.5	4.5	4.8	4.6	4.4	4.5	3.3	...	...
19	...	...	...	4.0	4.3	4.4	4.4	4.8	...a	...a	...a	...	...
20	...	...	...	...	4.3	4.5	4.9	...a	...a	...a	...a	...	...
21	...	...	...	4.0	4.2	4.3	4.4	4.5	4.4	4.2	3.5	...	...
22	...	...	...	...	4.4	4.5	4.3	4.4	4.4	3.9	3.5	...	...
23	...	...	...	...	4.2	4.5	4.5	4.5	4.4	4.0	3.8	...	...
24	...	...	...	4.2	4.2	4.5	4.6	5.2	4.4	4.2	...a	...	...
25	...	...	...	4.3	4.5	4.4	4.8	4.4	...a	...a	...a	...	...
26	...	...	...	3.7	4.3	4.4	4.6	4.4	3.8	3.4	...	...	...
27	...	...	...	4.0	4.8	4.9	4.8	4.8	4.8	3.9	3.2	...	...
28	...	...	...	4.4	4.6	4.7	4.7	4.2	4.4	4.7	...	...	...
29	...	...	...	4.3	4.4	4.8	4.7	4.5	4.6	3.5	...	...	...
30	...	...	...	4.0	4.6	4.4	4.3	4.8	4.2	4.0	...	...	...
31													
* MEAN	...	...	3.4	4.0	4.4	4.6	4.7	4.7	4.5	4.1	3.5	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	220	225	200	210	190	240	240	...	...
2	...	...	...	230	225	220	225	240	225	230	225	...	...
3	...	...	...	200	225	230	p230a	240	210	p220a	240	...	...
4	...	...	...	230	240	230	200	200	220	215	230	...	...
5	...	...	...	225	230	220	220	220	255	225	235	...	...
6	...	...	...	220	230	200	240	250	260	225	230	...	...
7	...	...	...	235	240	220	...a	...a	...a	...a	...a	...a	...
8	...	...	...	...	240	235	235	235	...a	...a	...a	...	...
9	...	...	...	230	210	220	235	235	220	240	230	...	...
10	...	...	...	220	215	205	230	225	...c	...c	...c	...	...
11	...	...	...	225	235	235	p240	230	260	250	...	...	...
12	...	...	220	210	195	210	225	p240a	240	...a	...	...	...
13	...	...	...	...	...a	210	245	195	240	...a	...a	...	...
14	...	...	...	...	210	240	235	240	250	255	...a	...	...
15	...	...	...	240	220	225	230	235	p235a	p235a	235	...	...
16	...	...	...	220	...a	...a	...a	205	220	220	...	...	...
17	...	...	...	225	215	200	195	200	p220c	235	235	...	...
18	...	...	...	230	225	235	225	220	220	245	220	...	...
19	...	...	...	225	...a	...a	...a	230	...a	...a	...a	...	...
20	...	...	...	...a	240	...a	...a	...a	...a	...a	...a	...	...
21	...	...	...	225	...a	...a	...a	...a	...a	...a	235	...	...
22	...	...	...	...a	210	225	225	220	220	195	235	...	...
23	...	...	...	200	230	225	200	235	245	...a	...a	...	...
24	...	...	...	...	...	235	225	220	240	220	...a	...	...
25	...	...	...	240	235	220	240	220	...a	...a	...a	...	...
26	...	...	...	245	225	235	230	...a	...a	...a	...a	...	...
27	...	...	...	225	215	p215	p215	210	250	210	225	...	...
28	...	...	...	230	220	210	210	190	215	220	230	...	...
29	...	...	...	...	225	210	230	235	205	210	...	...	...
30	...	...	...	230	230	215	200	225	230	235	...	...	...
31													
* MEAN	...	...	220	226	224	221	223	223	230	228	232	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 102

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1940 JUNE 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.6	0.7	1.0	0.8	0.7	0.8	0.8	0.7	0.7	0.8	0.6
2	...	0.5	0.7	0.7	0.7	0.9	0.8	0.8	0.7	0.7	0.7	0.8	0.8
3	...	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
4	...	0.5	0.5	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5
5	...	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5
6	...	0.6	0.7	0.8	0.8	1.0	0.8	0.7	0.8	0.6	0.6	0.7	...e
7	...	0.6	0.8	0.8	0.8	1.0	1.0	0.9	0.7	0.6	0.6	0.5	0.6
8	...	0.6	0.7	0.7	0.7	0.8	0.8	0.8	1.0	0.8	0.8	0.7	0.6
9	...	0.6	0.8	0.7	0.8	0.9	1.0	0.8	0.7	0.7	0.6	0.7	0.7
10	...	0.7	1.0	0.7	0.7	0.8	0.8	0.8	...c	...c	...c	0.8	0.7
11	...	0.6	0.7	0.8	0.9	0.9	0.9	1.1	1.0	0.9	0.7	0.7	0.7
12	...	0.6	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6
13	...	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.6
14	...	0.6	0.9	0.8	0.9	1.0	0.8	0.7	0.7	0.8	0.8	0.7	...e
15	...	0.7	0.9	0.7	0.9	0.9	1.0	1.0	0.7	0.8	0.7	0.5	...e
16	...	...e	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.5
17	...	0.6	0.9	0.8	0.9	0.7	0.6	0.8	p0.7	0.7	0.6	0.7	0.6
18	...	...e	0.8	0.8	0.7	0.6	0.7	0.8	0.7	0.8	0.7	0.7	0.6
19	...	0.6	0.6	0.7	0.7	1.0	0.9	0.7	0.7	0.7	0.7	0.8	0.5
20	...	0.6	0.7	p0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.7	0.7	...e
21	...	...e	0.6	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.8	p0.7c
22	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.6
23	...	...e	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.6	0.6
24	...	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...e
25	...	...e	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.6	...e	...e	...e
26	...	...e	0.7	0.6	0.7	0.8	0.9	1.0	0.9	0.8	0.8	0.7	0.6
27	...	...e	...e	0.6	0.6	p0.7	p0.7	0.7	0.7	0.7	0.7	0.6	...e
28	...	0.5	...c	0.7	0.7	0.7	0.9	0.8	0.7	0.7	0.5	...e	...e
29	...	...c	...c	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.5
30	...	...e	0.6	0.7	0.9	0.9	1.0	0.8	0.8	0.8	0.7	0.6	...e
31													
MEAN*	0.5	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.6	2.3	3.0	3.0	3.2	3.2	3.3	3.1	2.9	2.6	1.7	...
2	...	1.7	2.3	2.7	3.0	3.1	3.3	3.2	3.1	3.0	2.4	1.8	...
3	...	1.7	2.6	2.8	3.1	3.2	3.3	3.3	3.1	2.9	2.5	1.5	...
4	...	1.8	2.7	3.0	2.7	2.8	3.3	3.2	3.0	2.8	2.5	1.7	...
5	...	1.8	2.8	3.0	3.0	3.3	3.3	2.9	2.6	2.8	2.3	1.8	...
6	...	1.7	2.6	2.8	3.1	3.2	3.7	3.3	3.1	2.9	2.3	2.1	...
7	...	1.5	2.4	3.0	3.0	3.2	3.3	3.2	2.9	2.4	1.9	1.8	...
8	...	1.6	2.7	3.2	3.5	3.6	3.6	3.4	3.2	2.9	2.3	1.7	...
9	...	...a	2.5	3.0	3.0	3.6	3.5	3.4	3.0	2.7	2.5	1.8	...
10	...	1.7	2.6	2.6	3.0	3.1	3.6	3.3	...c	...c	...c	...c	...
11	...	1.8	2.8	3.3	3.3	3.6	3.9	3.3	3.2	2.9	2.3	1.9	...
12	...	1.8	2.4	2.9	3.1	3.4	3.5	3.8	3.3	3.2	...a	...	...
13	...	1.6	2.3	2.8	3.1	3.3	3.3	3.5	3.3	2.8	3.0	2.0	...
14	...	1.6	2.3	2.8	3.1	3.3	3.4	3.3	3.1	2.9	2.4	...a	...
15	...	1.6	2.4	2.7	3.1	3.2	3.1	3.3	3.1	2.6	2.4	2.2	...
16	...	1.2	2.0	2.9	3.4	3.2	3.9	3.3	3.1	3.0	2.5	...	...
17	...	1.5	2.4	3.0	3.1	3.1	3.0	3.3	p3.2c	3.1	...a	...a	...
18	...	1.6	2.7	3.0	3.5	3.2	3.3	3.3	2.9	2.9	2.5	1.7	...
19	...	1.6	2.4	3.0	3.2	3.3	3.3	3.3	2.6	...a	2.5	...a	...
20	...	1.5	2.5	3.1	3.3	3.3	3.3	3.3	3.0	2.5	p2.2	2.0	...
21	...	1.6	2.5	2.8	3.0	3.2	3.3	3.2	2.9	...a	2.6	1.8	...
22	...	1.8	2.5	3.1	3.4	3.1	3.2	3.2	3.1	2.9	2.5	1.8	...
23	...	1.3	2.4	2.8	3.1	3.3	3.2	3.3	3.1	2.7	2.5	1.9	...
24	...	1.3	3.0	3.0	3.1	3.2	3.3	3.3	3.2	2.9	2.6	1.8	...
25	...	1.4	2.4	2.7	3.0	3.3	3.3	3.3	3.0	p2.7a	2.4	1.9	...
26	...	1.8	2.4	2.8	3.0	2.9	3.3	3.0	p2.9a	p2.8a	2.6	1.8	...
27	...	1.5	2.4	2.9	3.1	3.6	3.5	3.3	3.2	3.0	2.6	1.9	...
28	...	1.5	2.7	2.8	3.1	3.1	3.4	3.4	3.3	3.0	2.6	1.9	...
29	...	1.9	2.4	2.7	2.9	3.3	3.3	3.3	3.1	3.0	2.7	2.0	...
30	...	1.7	2.6	2.8	3.0	3.3	3.3	3.5	3.2	2.9	2.5	1.9	...
31													
MEAN*	...	1.6	2.5	2.9	3.1	3.2	3.4	3.3	3.1	2.9	2.5	1.8	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 103

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	3.1	3.3	3.4	3.6	3.6	3.5	4.9	6.4	8.0	7.9	7.8	8.2	8.4	7.6	7.7	6.7	6.6	5.5	4.5	4.3	3.1	3.0	3.3	5.3
2	3.7	3.5	3.3	3.5	3.8	3.6	3.2	4.5	6.4	7.5	7.1	8.2	6.8	7.5	8.5	8.1	7.6	7.3	5.0	3.4	3.0	2.9	3.1	3.3	5.2
3	3.4	3.3	3.6	3.5	4.2	3.7	3.7	4.6	6.6	7.3	7.2	7.8	7.3	8.0	8.2	8.6	7.8	7.4	6.1	3.8	3.6	3.4	3.6	3.6	5.4
4	4.0	4.1	4.2	3.8	3.6	3.5	3.1	4.6	7.5	7.0	7.8	8.2	9.5	9.1	9.5	9.3	8.4	7.5	7.5	5.2	4.0	2.7	2.8	3.0	5.8
5	3.0	2.8	3.1	3.1	2.9	3.0	3.2	4.1	6.9	8.4	8.4	8.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.5	7.6	7.2	8.2	8.2	8.9	9.3	8.3	7.7	6.5	4.1	3.6	3.7	3.7	3.7	...
7	4.0	4.0	4.0	4.1	4.3	4.3	3.8	4.6	6.5	7.8	8.2	8.1	8.3	8.3	9.0	7.9	7.7	7.6	6.3	4.5	3.0	2.8	2.6	2.9	5.6
8	3.1	3.1	3.5	3.3	3.6	3.3	2.8	4.0	6.4	7.3	8.7	8.1	8.6	7.5	...c	...c	...c	6.7	5.9	3.9	4.0	3.5	3.5	3.6	...
9	4.0	4.0	4.3	4.3	4.2	4.1	3.7	4.5	6.2	6.7	7.7	7.3	7.2	7.5	8.4	9.0	8.5	7.7	6.5	5.6	3.5	3.5	3.9	3.7	5.7
10	3.5	3.7	3.8	4.1	3.8	3.4	3.4	4.6	6.8	7.7	8.0	7.8	8.2	9.4	10.0	10.0	9.6	9.1	7.3	6.0	4.6	3.2	3.0	3.6	6.0
11	3.0	3.7	3.6	3.7	4.0	4.0	3.8	4.2	...c	...c	8.2	8.4	8.9	9.9	9.0	9.2	8.8	7.9	5.6	6.2	3.9	3.0	3.3	3.4	...
12	3.4	3.2	3.4	3.2	3.3	3.0	2.9	4.1	7.1	7.4	8.3	8.2	7.7	8.0	8.5	8.9	7.9	7.6	6.2	4.8	3.2	3.2	2.8	2.5	5.4
13	2.8	3.1	3.1	3.5	3.4	3.2	3.3	4.2	p6.5c	8.0	8.6	7.2	7.9	7.8	8.5	8.6	8.3	7.3	5.7	4.9	4.1	4.2	4.5	4.3	5.5
14	4.1	4.3	3.7	2.5	2.4	2.2	2.5	4.3	p5.6c	6.8	7.4	7.0	6.9	7.8	8.3	7.7	8.0	p7.0c	5.6	4.6	4.0	3.3	3.8	3.8	5.2
15	3.2	3.3	3.0	3.0	2.9	2.7	2.3	4.2	6.3	8.7	8.6	8.6	8.7	8.3	8.5	9.5	7.4	7.1	6.1	2.8	3.5	3.3	2.9	3.1	5.3
16	3.2	2.5	2.5	2.9	3.1	2.5	2.2	4.6	6.0	8.0	9.0	9.1	8.2	7.7	9.1	7.6	8.2	7.3	6.4	4.0	3.8	3.4	2.9	2.9	5.3
17	3.3	3.3	3.3	3.5	3.4	2.6	2.7	p4.2c	5.4	8.0	7.8	8.3	7.7	7.3	7.8	8.4	7.9	7.2	6.2	4.3	3.7	2.9	2.9	3.0	5.2
18	3.1	3.3	3.3	3.5	3.6	3.5	2.7	4.0	6.2	6.6	7.8	7.3	8.0	8.5	7.5	8.4	7.5	7.3	5.3	3.0	2.7	2.8	3.1	3.0	5.1
19	3.1	3.3	3.5	3.7	3.8	3.5	2.7	4.5	6.0	6.8	6.6	7.5	7.0	7.7	7.2	8.0	8.1	6.8	5.5	3.3	3.0	2.7	2.7	3.0	5.0
20	2.9	3.3	3.3	3.2	3.5	2.9	2.7	4.1	p5.8c	6.9	7.6	6.8	7.0	7.9	7.5	7.5	7.9	7.2	5.9	4.7	2.9	2.7	3.0	3.3	5.0
21	3.2	3.4	3.7	3.7	3.8	3.6	3.3	4.5	5.7	6.6	7.1	7.7	...c	...c	...c	7.5	8.0	6.7	6.1	4.4	3.3	3.5	3.3	3.2	...
22	3.4	3.3	3.5	3.6	3.5	3.6	2.9	4.6	6.3	6.9	6.7	8.9	7.1	7.7	8.7	8.9	9.4	9.3	7.0	4.8	2.7	3.0	3.7	4.0	5.6
23	3.8	3.9	4.0	4.0	3.9	3.8	3.8	4.6	5.9	7.3	7.3	8.7	7.5	8.3	8.4	9.2	7.1	7.0	6.2	4.2	3.6	3.0	3.5	3.6	5.5
24	4.0	4.0	3.8	4.0	3.6	3.4	3.6	5.0	6.5	7.3	7.9	8.2	7.8	7.9	8.0	8.2	8.0	7.8	p6.5c	4.3	3.1	2.9	3.4	3.4	5.5
25	3.4	3.5	3.0	p3.2c	3.5	3.3	3.1	...c	...c	7.4	7.9	8.2	8.0	8.4	8.0	8.3	7.8	7.0	5.9	5.0	3.6	2.5	3.0	3.1	...
26	2.8	2.9	2.6	2.7	2.9	2.3	2.2	4.2	5.9	7.7	7.8	7.4	7.4	7.4	7.4	8.0	6.7	7.2	5.1	4.1	3.6	2.9	2.5	3.0	4.9
27	3.0	3.0	3.1	2.9	2.9	2.4	2.1	4.1	6.6	7.7	7.6	7.9	7.6	6.8	7.5	7.0	7.7	6.9	5.8	3.4	2.8	3.0	2.8	3.0	4.9
28	2.8	2.5	2.9	3.1	2.6	2.5	2.1	4.2	6.3	7.1	7.1	7.3	7.0	6.6	7.3	7.0	7.0	6.3	5.8	4.4	4.0	3.7	3.9	3.3	4.9
29	3.7	3.6	3.7	4.0	3.9	...c	...c	...c	...c	6.8	7.0	7.1	8.4	7.2	7.2	8.1	7.2	6.3	5.6	3.8	3.0	3.2	3.2	3.3	...
30	3.7	3.7	3.4	3.1	2.4	2.5	2.6	4.5	p6.0c	7.0	7.0	7.8	7.3	6.9	8.0	8.8	8.0	6.8	5.8	4.9	4.1	4.2	4.2	4.2	5.3
31	3.9	3.5	3.5	4.0	2.7	3.5	2.6	4.4	p6.5c	7.9	7.3	7.9	7.0	8.0	8.1	9.0	8.6	7.1	4.4	4.1	4.0	3.4	3.6	3.9	5.4
MEAN*	3.4	3.4	3.4	3.5	3.4	3.2	3.0	4.4	6.3	7.4	7.7	7.9	7.8	7.9	8.2	8.4	7.9	7.3	6.0	4.4	3.5	3.2	3.3	3.4	5.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 104

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1940 JULY 1940

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	245	260	260	265	260	240	235	230	225	245	240	255	250	250	250	235	250	220	210	230	225	225	235	245	241
2	245	215	260	270	250	220	235	235	225	250	245	250	350	270	250	235	250	225	220	210	250	240	260	240	246
3	240	245	240	240	240	260	230	230	230	240	245	260	275	280	260	260	240	230	p240a	245	230	270	260	280	249
4	275	240	240	235	225	260	200	250	220	250	260	270	265	315	290	260	225	225	230	215	230	225	260	270	247
5	235	270	270	245	210	250	235	220	225	230	250	250	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	245	260	235	260	250	285	245	240	220	215	205	210	230	230	260	...
7	260	250	240	240	270	235	230	250	225	230	260	255	270	320	255	245	220	220	210	250	190	250	270	300	248
8	280	285	p270a	250	235	210	230	235	235	250	240	250	270	250	...c	...c	...c	240	210	245	240	240	230	245	...
9	260	270	260	235	240	220	220	220	215	260	270	240	240	240	260	265	230	230	200	210	225	260	260	250	241
10	300	250	260	270	250	250	...a	...a	220	245	250	260	260	275	280	270	235	230	215	215	230	225	230	230	...
11	260	245	230	260	250	235	205	220	230	240	255	255	235	250	275	270	250	220	215	230	200	230	270	265	241
12	250	250	235	270	235	210	235	240	235	240	250	245	275	285	255	260	250	220	220	220	230	230	250	270	244
13	280	270	p260a	260	250	245	245	230	220	250	250	250	250	285	280	250	240	210	230	255	240	315	310	320	258
14	325	250	280	300	265	330	270	245	240	240	265	260	240	300	265	240	260	230	230	215	235	265	270	260	262
15	230	255	255	250	260	230	200	245	230	250	260	270	300	310	270	240	230	235	205	p220a	240	240	240	290	248
16	210	275	260	260	230	250	265	240	225	260	260	250	260	250	250	290	250	220	220	235	230	250	280	260	249
17	260	250	260	260	210	p230a	240	220	220	230	255	270	265	270	260	260	230	220	225	240	235	250	250	260	245
18	265	255	270	260	245	220	220	240	220	240	265	250	325	270	255	260	240	230	220	250	300	270	240	250	252
19	270	270	245	255	230	225	220	245	225	225	240	260	270	280	290	255	230	230	230	215	250	...a	...a	290	...
20	270	250	245	250	230	220	250	240	235	230	260	260	270	265	265	295	245	225	p210a	200	230	250	260	265	247
21	255	260	260	240	240	230	220	220	225	240	260	250	...c	...c	...c	255	240	...a	...a	250	270	240	260	280	...
22	245	270	260	260	260	200	230	225	225	250	235	260	320	260	270	295	275	230	200	200	p250a	300	270	275	253
23	250	245	260	235	250	260	225	225	230	250	250	260	240	270	300	260	220	235	225	240	230	260	275	280	249
24	265	230	250	230	240	230	240	220	230	240	260	p260c	260	235	p240a	240	250	225	200	225	250	280	290	265	244
25	250	265	250	250	230	235	260	p240a	230	240	265	270	250	250	275	260	240	240	200	225	210	270	300	240	248
26	270	240	235	240	225	p240a	260	220	225	260	270	250	265	260	275	260	240	230	210	220	240	230	250	250	244
27	300	240	250	p240a	240	190	p220a	245	240	245	260	265	250	270	250	265	p250a	230	200	215	250	260	260	p250a	245
28	240	270	260	235	210	240	270	240	230	240	260	280	275	260	275	270	240	220	220	230	235	235	240	260	247
29	240	235	255	260	245	...c	...c	...c	...c	230	260	280	285	265	315	275	240	210	215	p240a	250	260	250	270	...
30	280	240	240	220	225	220	270	240	235	245	270	270	265	250	250	270	245	220	230	220	260	250	270	245	247
31	230	280	240	230	225	240	250	250	250	230	220	280	260	290	260	265	250	220	235	265	235	240	265	240	248
*MEAN	260	254	253	250	239	235	236	234	228	243	255	259	269	270	268	260	242	226	217	228	237	251	260	264	247

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 105

JULY 1940 | JULY 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.2	4.3	4.3	4.6	4.5	4.4	4.2	...	...	...
2	...	...	...	4.1	4.2	4.5	5.3	4.8	4.3	3.7	...	...	...
3	...	...	...	3.9	4.3	4.5	4.5	4.6	4.3	4.2	3.5	...	...
4	...	...	...	3.8	4.4	4.9	4.8	5.0	4.8	4.0	...	...	...
5	...	...	...	4.0	4.4	4.4	...c	...c	...c	...c	...	...	...
6	...	...	...	4.1	4.1	4.2	4.1	4.6	4.3	4.3	3.8	...	...
7	...	...	...	...	4.3	4.5	4.8	4.3	4.8	3.7	...	...	...
8	...	...	...	4.1	4.5	4.6	4.6	4.4	...	...	...	...	...
9	...	...	...	4.4	4.8	4.5	4.5	4.7	4.7	4.0	3.4	...	...
10	...	...	...	4.3	4.7	4.5	4.6	4.8	4.5	4.3	3.6	...	...
11	...	...	...	3.8	4.4	4.5	4.6	4.3	4.6	4.6	3.5	...	...
12	...	...	...	3.8	4.5	4.4	4.9	5.0	4.6	4.3	...	...	...
13	...	...	...	3.6	4.5	4.5	4.7	4.8	5.0	3.9	...	...	...
14	...	...	...	3.6	4.2	4.4	4.5	5.0	4.5	4.0	3.8	...	...
15	...	...	...	4.0	4.4	4.8	4.8	5.3	4.6	4.3	...	...	...
16	...	...	3.1	4.3	5.1	4.7	4.6	4.4	4.5	4.9	3.4	...	...
17	...	...	3.0	...	4.4	4.7	4.6	...a	4.3	3.9	3.3	...	...
18	...	...	...	3.6	4.2	4.5	5.1	4.6	4.4	3.8	...	...	...
19	...	...	...	3.9	4.3	4.4	4.7	4.6	4.9	4.4	3.7	...	...
20	...	...	...	...	4.6	4.6	4.5	4.8	4.4	4.5	3.6	...	...
21	...	...	2.8	4.0	4.3	4.6	4.7	4.8	4.5	4.3	3.6	...	...
22	...	...	...	4.0	4.3	4.8	5.1	4.7	4.5	4.6	...	...	...
23	...	...	...	4.0	4.3	4.4	4.6	4.8	4.6	4.4	3.5	...	...
24	...	...	...	...	4.4	4.5	4.8	4.6	4.4	3.8	...	...	...
25	...	...	...	3.9	4.6	4.8	4.7	4.6	4.7	4.2	3.4	...	...
26	...	...	...	4.3	4.5	4.5	4.6	4.3	4.3	4.3	3.3	...	...
27	...	...	...	4.4	4.8	4.4	4.5	4.7	4.4	3.6	...	...	...
28	...	...	...	4.2	4.3	4.7	4.6	4.4	4.3	4.4	...	...	...
29	...	...	...	3.8	4.5	4.8	4.6	4.6	4.5	4.1	3.7	...	...
30	...	...	...	...	4.4	4.7	4.6	4.4	4.3	...	...	...	...
31	...	...	...	4.0	4.0	4.7	4.6	4.8	4.3	4.2	3.7	...	...
* MEAN	...	...	3.0	4.0	4.4	4.6	4.7	4.7	4.5	4.2	3.6	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	220	225	195	220	220	210	220	...	...	...
2	...	...	...	200	220	220	220	210	220	230	...	...	...
3	...	...	...	225	200	220	220	210	225	...a	230	...	...
4	...	...	...	210	205	190	225	220	220	210	...	...	...
5	...	...	...	230	230	220	...c	...c	...c	...c	...c	...	...
6	...	...	...	245	220	200	200	220	190	250	225	...	...
7	...	...	...	...	215	220	215	190	220	210	...	...	...
8	...	...	...	240	220	165	260	210	...c	...c	...c	...	...
9	...	...	...	225	250	230	220	205	230	230	220	...	...
10	...	...	...	225	230	220	225	245	220	...a	225	...	...
11	...	...	...	225	220	230	225	220	230	200	245	...	...
12	...	...	...	235	210	220	200	220	230	210	...	...	...
13	...	...	...	240	250	220	190	200	220	220	...	...	...
14	...	...	...	240	235	220	210	220	240	230	245	...	...
15	...	...	...	235	200	250	220	220	215	240	...	...	...
16	...	...	210	245	235	210	200	210	240	230	240	...	...
17	...	...	200	...	210	225	225	...a	235	220	200	...	...
18	...	...	...	225	225	240	210	210	220	220	...	...	...
19	...	...	...	225	230	230	215	225	230	235	230	...	...
20	...	...	...	...	230	230	235	...a	...a	...a	225	...	...
21	...	...	...	235	250	235	230	240	220	...a	235	...	...
22	...	...	...	230	200	255	200	230	225	240	...	...	...
23	...	...	...	235	230	200	220	255	200	225	210	...	...
24	...	...	...	...	210	190	190	235	220	220	...	...	...
25	...	...	...	220	210	210	210	220	230	225	230	...	...
26	...	...	...	230	230	220	220	...a	190	250	205	...	...
27	...	...	...	235	240	...a	200	220	200	200	...	...	...
28	...	...	...	235	220	235	220	210	190	240	...	...	...
29	...	...	...	220	230	235	220	225	250	215	235	...	...
30	...	...	...	...	260	220	...c	220	215	...	...	...	...
31	...	...	...	220	200	190	190	190	220	225	240	...	...
* MEAN	...	...	205	229	224	219	215	219	220	225	228	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 106

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1940 | JULY 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...e	...	0.7	2.4	2.9	3.1	3.2	3.2	3.3	3.3	3.0	2.5	1.9	...
2	...	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.8	0.7	0.6	...e	...	1.2	2.0	3.0	3.0	3.4	3.4	3.4	3.3	3.0	2.5	1.8	...
3	...	0.5	0.6	0.6	0.7	0.8	0.7	0.6	0.7	0.6	0.8	0.8	...e	...	1.4	2.4	2.8	3.1	3.2	3.1	3.3	3.2	2.8	2.5	...a	...
4	...	...e	p0.5c	...e	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.5	...e	...	1.7	2.2	2.8	3.1	3.2	3.2	3.3	3.2	3.0	2.5	1.9	...
5	...	...e	0.7	0.6	0.8	0.7	...c	...c	...c	...c	...c	...c	...c	...	1.7	2.5	2.8	3.1	3.2	...c	...c	...c	...c	...c	...c	...
6	...	...c	...c	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.6	...e	....	...c	...c	2.6	3.0	3.1	3.3	3.2	3.1	3.2	2.4	1.6	...
7	...	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...	1.3	2.0	2.8	3.0	3.1	3.2	3.1	3.2	2.8	2.5	1.9	...
8	...	0.6	0.5	0.5	0.6	0.6	0.6	0.7	...c	...c	...c	0.7	...e	...	1.6	2.4	2.8	3.1	3.1	3.1	3.3	...c	...c	...c	...a	...
9	...	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	...e	...	1.6	2.0	2.8	3.0	3.2	3.3	3.2	3.2	3.0	2.6	1.9	...
10	...	...e	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	...e	...	p1.6a	2.4	2.9	3.0	3.1	3.1	3.2	3.3	3.0	2.5	1.7	...
11	...	...e	0.6	0.6	0.7	0.9	0.7	0.7	0.7	0.6	0.7	0.7	...e	...	1.2	2.3	2.9	3.1	3.1	3.2	3.3	3.1	2.9	2.8	2.0	...
12	...	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.6	...e	...e	...	1.7	2.5	2.8	3.0	3.2	3.3	3.1	3.1	2.9	2.4	1.9	...
13	...	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.7	0.6	...e	...	1.5	2.3	2.8	3.1	3.3	3.3	3.2	3.3	2.9	2.6	1.4	...
14	...	...e	0.6e	0.7	0.8	0.7	0.7	0.6	0.7	0.6	0.6	0.6	...e	...	1.7	2.4	2.9	3.0	3.2	3.1	3.3	3.1	2.7	2.5	1.8	...
15	...	0.6	0.8	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.6	...e	...	1.6	2.3	2.9	3.1	3.3	3.2	3.1	3.0	3.0	2.5	1.9	...
16	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	...e	....	1.6	2.2	2.9	3.0	3.2	3.2	3.1	3.1	2.9	2.5	1.7	...
17	...	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	...e	...	1.6	2.5	2.8	3.2	3.4	3.3	3.0	3.3	...a	...a	1.9	...
18	...	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.6	...e	...e	...	1.7	2.6	2.9	3.3	3.3	3.3	3.3	3.2	2.9	2.6	1.8	...
19	...	0.6	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	...e	...	1.0	2.7	3.2	3.1	3.2	3.4	3.4	3.3	2.8	2.6	1.8	...
20	...	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.6	...e	...	1.8	2.3	2.9	3.2	3.3	3.4	3.4	3.2	2.9	2.5	1.7	...
21	...	...e	0.7	0.7	0.8	1.0	1.0	0.8	0.8	0.7	0.7	...e	...e	...	1.2	2.2	2.9	3.2	3.4	3.5	3.4	3.2	3.1	...a	1.7	...
22	...	0.5	0.6	0.7	0.7	0.7	0.6	0.7	0.8	0.8	0.6	0.6	...e	...	1.4	2.3	2.7	3.0	3.2	3.3	3.3	3.2	2.8	...a	2.0	...
23	...	...e	0.5	0.6	0.7	0.8	0.7	0.7	0.8	0.7	0.7	0.6	...e	...	1.6	2.2	3.0	3.1	3.3	3.3	3.4	3.3	3.3	p2.7a	2.0	...
24	...	0.6	0.7	0.8	0.9	0.6	0.7	0.7	0.7	0.7	0.8	0.6	...e	...	1.5	2.3	3.2	3.3	3.3	3.3	3.3	3.1	2.9	2.9	2.1	...
25	...	0.6	0.7	0.6	0.7	0.6	0.7	0.8	0.8	0.7	0.7	0.6	...e	...	1.7	2.3	2.8	3.1	p3.2a	3.3	3.3	3.2	3.0	2.7	2.0	...
26	...	...c	...c	...c	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.5	...e	...	1.8	2.6	3.2	3.2	3.3	3.3	3.0	3.1	2.9	2.6	1.8	...
27	...	0.5	0.6	0.7	0.6	0.7	0.6	0.7	0.7	0.7	0.7	...e	...e	...	1.6	2.4	2.8	3.3	3.1	3.3	3.3	3.2	3.0	2.4	1.9	...
28	...	...e	0.6	0.7	0.6	0.7	0.7	0.8	0.7	0.6	0.5	0.6	...e	...	1.7	2.4	3.0	3.2	3.3	3.4	3.3	3.2	3.1	2.7	2.0	...
29	...	...c	...c	0.7	0.6	0.6	0.6	0.7	0.6	0.7	0.6	...e	...e	...	...c	...c	2.9	3.1	3.3	3.4	3.1	3.2	2.9	2.6	2.0	...
30	...	...e	0.6	0.6	0.6	...c	...c	0.7	...c	0.7	0.7	0.6	...e	...	1.8	2.5	2.9	3.2	p3.2c	3.3	3.3	3.1	2.9	p2.6a	2.1	...
31	...	0.6	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.7	0.7	0.7	...e	...	1.8	2.4	2.8	3.1	3.3	3.4	3.3	3.1	3.0	2.8	1.8	...
*MEAN	...	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.5	...	1.6	2.3	2.9	3.1	3.2	3.3	3.2	3.2	3.0	2.6	1.9	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 107

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1940 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — AUGUST 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.3	4.0	3.2	3.6	3.4	3.3	3.4	4.8	7.1	p8.4	8.8	p8.4	7.8	8.0	7.4	9.3	7.8	6.1	6.0	4.0	4.2	3.6	3.3	2.9	5.6
2	3.0	3.3	3.7	4.1	4.0	4.0	3.4	5.0	p6.5	7.2	7.3	7.6	7.3	6.6	p6.5	p6.4	6.3	6.2	6.2	4.3	4.1	3.6	3.6	3.5	5.2
3	3.5	4.0	3.9	3.7	3.3	3.4	3.4	5.0	p5.8	6.6	p6.9	p7.2	7.3	8.7	9.3	7.3	7.5	8.0	7.8	7.3	5.5	4.5	4.6	4.3	5.8
4	4.3	4.3	4.5	4.0	2.6	2.7	...c	...c	...c	...c	...c	...c	...c	8.9	7.5	8.2	8.2	p7.0	6.1	5.8	4.3	2.9	3.0	3.0	...
5	3.0	2.6	3.3	3.3	3.3	3.1	p3.0a	p5.0c	6.8	7.1	7.2	7.3	8.0	7.5	p7.8	p8.0	7.7	8.4	6.7	4.2	3.3	3.0	3.3	3.6	5.3
6	3.0	3.1	2.8	3.0	3.3	3.3	3.1	5.0	...a	...c	...c	8.1	7.7	8.0	p8.4	9.2	7.7	7.7	6.3	5.0	3.9	3.8	4.1	4.1	...
7	3.6	3.5	3.6	4.0	4.1	3.9	3.0	5.0	7.2	7.1	7.7	8.0	7.7	8.7	9.2	8.1	8.6	8.2	6.7	5.6	3.9	3.4	3.6	3.3	5.7
8	3.3	3.1	3.1	3.3	3.8	3.3	3.1	5.0	6.2	7.7	7.3	7.7	9.1	8.6	...c	...c	...c	7.3	6.5	5.0	3.6	3.9	4.0	3.2	...
9	3.0	3.1	3.1	3.6	3.9	3.5	3.1	5.2	6.2	7.3	7.9	8.0	8.4	8.7	8.2	8.9	9.2	9.2	6.3	4.3	3.1	3.4	3.7	4.0	5.6
10	3.5	4.0	2.7	2.5	2.5	2.5	2.5	4.3	5.7	6.5	6.7	6.6	6.7	7.9	7.4	7.6	7.3	7.0	5.9	4.5	3.1	3.1	2.9	2.6	4.8
11	p2.5a	2.5	2.2	2.2	2.0	1.8	2.5	4.9	6.9	7.3	8.2	8.1	8.4	9.0	9.1	7.9	7.2	7.5	7.0	5.7	3.8	3.4	3.3	3.3	5.3
12	3.2	p3.0a	2.8	2.9	2.8	2.5	2.1	5.3	7.7	7.8	8.4	9.0	9.1	9.1	8.2	8.0	7.6	7.9	8.0	5.4	4.2	3.7	3.5	3.4	5.6
13	3.3	3.5	3.6	3.4	3.6	3.2	3.0	5.1	7.3	7.4	8.1	8.8	9.1	8.4	9.6	8.7	7.8	8.0	7.8	5.2	4.0	3.2	3.0	3.2	5.8
14	3.3	3.3	3.3	3.8	3.4	3.0	2.5	5.3	6.9	p7.3c	p7.7c	8.2	7.9	8.6	8.7	8.3	8.0	7.5	6.4	5.8	4.2	3.6	3.3	3.3	5.6
15	3.7	3.5	3.0	3.3	3.5	3.3	3.3	5.6	6.8	7.4	7.2	7.2	8.2	8.8	9.0	7.7	p7.4	7.3	6.2	6.0	5.3	4.0	3.2	2.9	5.6
16	3.2	3.5	3.9	3.9	3.6	3.2	2.6	p5.5c	p7.0c	8.0	7.8	p8.0c	8.2	8.7	8.4	p8.0c	7.5	7.4	7.2	6.1	4.3	3.5	3.6	p3.6c	5.7
17	3.8	3.6	3.9	4.1	3.6	3.5	3.0	4.5	6.9	8.1	8.3	8.1	8.4	8.9	8.9	8.6	8.0	8.0	7.1	6.3	5.2	4.4	3.3	3.3	5.9
18	3.7	3.9	4.0	4.2	4.3	4.0	3.4	4.9	p7.0	7.2	7.7	8.2	8.4	8.8	8.4	8.2	7.8	8.5	8.2	6.7	4.7	4.2	3.9	4.1	6.0
19	4.1	4.3	4.6	4.8	4.3	4.5	4.2	5.1	7.2	7.5	8.2	9.6	9.8	9.2	9.3	9.1	8.7	7.7	6.7	5.8	4.3	4.0	4.1	4.1	6.3
20	4.3	4.3	4.3	4.7	4.0	3.3	2.6	5.7	7.3	7.7	8.7	9.5	10.4	9.7	9.4	9.4	10.2	8.6	8.0	6.4	4.9	4.3	4.5	4.4	6.5
21	4.3	4.3	4.4	4.4	4.6	...c	...c	...c	6.6	7.8	8.1	p9.0c	9.4	9.0	10.0	9.2	8.6	7.9	7.2	6.3	5.1	...c	...c	4.0	...
22	4.1	4.1	3.7	3.9	4.0	4.0	3.4	p6.0c	p7.5c	7.9	7.7	8.5	8.2	8.7	8.4	9.3	9.1	8.1	7.8	5.8	4.4	4.2	3.5	3.5	6.1
23	4.0	4.0	3.8	4.2	3.6	3.5	3.3	5.3	p7.0c	8.2	8.8	10.0	9.3	9.2	9.1	8.1	7.5	7.2	7.2	6.1	5.0	4.5	3.6	4.0	6.1
24	3.7	3.6	3.3	3.3	3.1	2.5	2.4	5.5	7.0	8.2	9.1	p9.0c	8.2	8.6	8.9	8.3	8.4	8.1	7.6	5.5	4.5	4.0	3.6	3.3	5.8
25	3.2	3.3	p3.3	p3.8	p4.0	p3.7	3.2	5.5	6.8	...c	...c	...c	...c	...c	...c	...c	...c	8.3	7.6	6.0	4.5	4.7	4.1	3.8	...
26	4.0	4.0	4.0	4.3	4.2	4.0	3.7	5.9	8.0	9.7	9.6	9.4	9.3	9.0	9.0	9.3	9.4	9.2	8.0	6.0	5.2	5.2	4.8	p4.6c	6.7
27	4.5	4.7	4.7	4.5	...c	...c	p4.0	...c	8.0	8.5	9.7	9.8	p9.8	...c	...c	...c	9.6	9.3	8.8	7.2	5.4	5.2	4.8	5.0	...
28	5.4	5.5	5.5	p5.0c	4.8	4.8	5.0	6.0	7.8	8.8	9.8	10.2	9.9	9.9	9.9	9.3	9.0	8.5	8.3	6.7	5.7	5.7	5.0	5.4	7.2
29	4.9	4.3	4.0	p4.0c	4.2	p4.2c	p4.2c	6.8	8.7	9.2	9.3	9.7	9.5	10.2	10.6	9.8	9.3	8.6	7.3	6.7	5.2	5.1	4.8	4.5	6.9
30	4.4	4.4	4.3	4.0	3.8	4.1	4.4	...c	...c	9.3	9.5	8.7	9.2	9.4	9.3	9.7	9.8	8.6	7.1	6.5	5.9	5.4	4.4	4.2	...
31	4.2	4.2	4.1	4.3	4.2	3.7	4.1	6.5	7.8	p9.0c	p10.0c	10.2	9.7	9.7	9.8	10.0	9.4	9.1	8.8	7.5	5.5	4.7	4.8	4.3	6.9
MEAN*	3.8	3.8	3.7	3.8	3.7	3.4	3.3	5.3	7.1	7.9	8.3	8.6	8.6	8.8	8.8	8.6	8.3	8.0	7.2	5.8	4.5	4.1	3.8	3.8	6.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 108

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — AUGUST 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	255	260	290	265	260	265	235	270	240	...c	...c	...c	280	280	270	245	220	220	200	210	245	210	230	210	...
2	240	255	250	245	220	235	200	240	p230	230	240	280	285	250	p240	p230	225	225	220	250	220	240	245	230	239
3	260	250	270	215	230	255	215	235	p235	240	p240	p250	250	290	265	260	245	250	255	245	250	260	265	290	251
4	295	275	255	230	220	280	...c	...c	...c	...c	...c	...c	...c	250	250	255	240	p235	230	235	215	250	255	245	...
5	235	250	280	270	225	240	p220a	p220c	220	235	260	270	270	260	p250c	p240c	225	260	210	220	235	260	270	220	243
6	240	245	245	245	235	220	215	235	225	p235c	p245c	280	260	270	p260c	250	225	235	210	225	235	250	255	235	241
7	225	220	245	240	255	250	230	225	230	230	240	270	265	260	255	265	260	220	235	215	220	260	250	245	242
8	290	285	285	270	280	260	245	230	230	245	260	250	245	280	...c	...c	...c	240	225	210	255	260	230	250	...
9	250	255	255	270	260	205	235	235	230	235	285	290	260	290	280	280	230	230	220	255	260	335	290	280	259
10	280	205	...a	265	275	300	240	265	270	295	...a	315	...a	...a	...a	260	245	240	220	215	235	255	280	...a	...
11	...a	...a	280	285	270	310	270	230	235	250	315	255	280	265	260	250	230	235	225	220	230	265	265	310	...
12	280	p280a	280	265	235	240	270	220	240	250	280	270	290	285	295	255	225	250	230	235	245	245	245	275	258
13	260	265	235	260	245	230	225	225	220	225	255	270	260	270	265	285	225	240	225	210	230	235	255	265	245
14	275	220	250	p235a	220	230	225	240	235	p245c	p255c	270	280	280	280	230	235	235	215	220	235	240	250	270	245
15	260	250	275	255	255	215	225	225	230	245	250	270	270	255	265	250	260	215	245	235	230	225	260	290	248
18	...c	310	275	250	245	250	255	...c	...c	250	265	...c	290	270	...c	...c	240	230	235	215	215	275	300	...c	...
17	280	285	280	255	255	280	200	230	235	255	265	270	280	275	260	p245c	235	235	215	220	220	220	210	235	248
18	255	265	290	280	240	250	235	245	p245c	245	265	285	280	270	280	...c	...c	...c	220	210	215	230	260	260	...
19	290	265	290	245	230	250	225	220	230	270	305	285	270	265	240	265	240	240	225	210	245	235	235	210	249
20	260	250	260	235	225	230	250	235	245	250	280	295	270	285	310	255	255	240	225	215	245	270	260	285	255
21	265	230	275	265	255	...c	...c	...c	230	250	275	p270c	270	300	270	260	235	230	225	235	225	...c	...c	240	...
22	230	225	205	270	255	235	240	235	240	280	265	290	295	300	300	270	250	240	225	215	250	p270a	300	285	257
23	275	250	275	275	225	230	240	250	230	265	275	p280	300	290	280	255	240	240	235	210	240	220	235	245	252
24	265	275	290	290	230	225	270	235	225	265	250	p260	270	...c	...c	...c	265	225	220	215	235	235	250	245	...
25	265	270	275	260	230	220	210	225	215	...c	...c	...c	...c	...c	...c	...c	...c	240	205	210	235	245	225	245	...
28	260	265	265	250	255	235	240	235	260	260	290	270	280	p270	295	270	220	230	210	210	230	255	245	p260c	252
27	270	265	235	220	...c	...c	p310	...c	275	240	275	280	270	...c	...c	...c	245	245	220	210	225	245	p260a	280	...
28	260	245	230	p225c	220	250	245	p240c	235	250	265	270	280	285	270	235	230	230	230	220	230	235	245	245	245
29	230	230	300	255	255	p255c	p260c	265	240	255	275	275	290	285	265	270	240	235	225	220	225	235	245	250	253
30	255	245	230	225	240	290	265	p260c	p255c	250	250	270	290	275	285	275	250	230	215	230	230	225	230	245	251
31	255	250	245	260	230	220	255	230	230	p240c	p260c	270	290	285	280	280	255	245	225	210	225	240	250	245	245
MEAN*	261	255	264	254	242	247	240	237	237	249	266	274	276	276	271	257	239	236	223	221	233	247	253	255	251

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 109

AUGUST 1940 — AUGUST 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	2.8	4.4	p5.0c	4.9	4.5	p4.4c	4.1	3.6	2.4	...
2	...	...	...	4.0	4.3	5.2	4.8	4.7	p4.4c	p4.0c	3.6	...	...
3	...	...	...	3.6	p4.0c	p4.5c	4.6	4.8	4.6	4.2	3.9	...	...
4	...	...	...	4.3	5.2	4.5	p4.6c	4.6	4.4	4.4	3.5	...	...
5	...	...	...	3.8	4.8	4.8	4.8	4.8	p4.5c	p4.2c	3.7	2.7	...
6	...	...	3.1	p4.0c	p5.0c	4.9	4.8	4.7	p4.6c	4.4	3.7	...	...
7	...	...	...	...	4.7	5.0	4.8	4.8	4.8	4.5	4.1	...	...
8	...	...	3.3	4.5	5.1	4.8	4.9	4.8	...c	...c	...c	...	...
9	...	...	3.0	4.0	4.8	5.0	4.8	5.0	4.7	4.7	4.0	...	...
10	...	...	3.5	4.2	...a	...a	...a	...a	...a	4.4	3.8	...	...
11	...	...	...	4.3	5.3	4.8	4.8	4.8	4.7	4.3	3.8	...	...
12	...	...	3.8	4.4	5.2	4.8	5.1	4.8	4.8	4.5	...a	...	...
13	...	...	p3.3	3.4	4.8	5.1	5.0	4.8	4.5	4.8	4.6	...	...
14	...	...	3.4	p4.0c	p4.8c	4.8	4.8	4.9	4.8	4.5	4.0	...	...
15	...	...	3.3	4.2	4.7	4.8	5.0	4.8	4.8	4.4	...a	...	...
16	...	...	...	4.5	4.8	5.2	4.9	5.0	4.8	4.7	...	...	...
17	...	...	3.3	4.7	4.8	5.0	4.8	4.9	4.7	4.6	3.7	...	...
18	...	...	2.8	4.3	5.0	4.9	5.0	4.8	5.0	...c	...c	...	...
19	...	...	3.7	4.8	5.0	5.0	4.9	4.8	4.7	4.7	4.0	...	...
20	...	...	3.8	4.8	5.0	5.2	5.0	4.9	5.0	4.6	4.0	...	...
21	...	...	...	4.7	5.2	p5.2c	5.1	5.5	5.0	4.7	3.9	2.7	...
22	...	...	3.5	4.7	4.9	5.4	5.2	5.0	5.1	4.7	3.8	...	...
23	...	...	...c	...c	4.7	4.9	5.0	4.9	4.9	4.8	3.8	...	...
24	...	...	...	4.8	5.0	p5.1c	5.1	5.2	4.9	4.7	4.5	...	...
25	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
26	...	...	4.5	4.9	5.2	5.3	5.0	p5.0	5.4	4.8	...	...	...
27	...	...	4.4	4.4	5.0	5.0	5.0	...c	...c	...c	3.8	...	...
28	...	...	3.2	4.4	5.0	5.4	5.2	5.1	4.8	4.4	3.7	...	...
29	...	...	...	4.8	5.3	5.2	5.2	5.2	4.8	5.0	4.0	...	...
30	...	...	...	4.8	4.9	5.3	5.3	5.0	5.2	4.9	4.3	...	...
31	...	...	...	...c	...c	5.1	5.4	5.3	5.0	5.0	4.4	...	...
* MEAN	...	...	3.5	4.3	4.9	5.0	5.0	4.9	4.8	4.6	3.9	2.6	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	210	p210c	205	205	p210c	240	230	...	...
2	...	...	...	215	200	180	200	210	p210c	p205c	205	...	...
3	...	...	...	200	p200c	p200c	220	240	220	230	230	...	...
4	...	...	...	210	210	210	220	210	210	220	...	...	...
5	...	...	...	210	200	195	210	205	p205c	p210c	230	...	...
6	...	...	220	p210c	p210c	210	210	205	p210c	210	215	...	...
7	...	...	...	...	...	215	210	235	240	210	240	...	...
8	...	...	225	235	240	205	230	205	...c	...c	...c	...	...
9	...	...	...	210	220	230	210	245	240	270	220	...	...
10	...	...	230	250	...a	...a	...a	...a	...a	...a	225	...	...
11	...	...	...	195	220	215	190	250	215	210	220	...	...
12	...	...	240	215	220	230	225	200	235	240	...a	...	...
13	...	...	...	220	210	215	220	205	...a	215	220	...	...
14	...	...	225	p220c	p230c	235	235	215	220	220	225	...	...
15	...	...	225	210	225	210	205	200	240	215	...a	...	...
16	...	...	...	220	205	210	220	225	215	...c	...	...	...
17	...	...	235	235	235	210	205	235	220	220	230	...	...
18	...	...	...c	225	220	225	235	225	p210	...c	...c	...	...
19	...	...	225	220	220	210	215	215	215	210	225	...	...
20	...	...	235	225	230	225	210	210	200	240	235	...	...
21	...	...	...	210	210	p210c	210	220	220	230	220	230	...
22	...	...	220	215	210	210	210	220	220	250	220	...	...
23	...	...	...	...	230	235	210	230	210	215	215	...	...
24	...	...	...	235	225	p220c	215	220	215	215	235	...	...
25	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
26	...	...	...	230	240	215	210	p215	210	210	...	...	...
27	...	...	240	230	220	215	210	...c	...c	...c	220	...	...
28	...	...	220	215	225	210	220	205	220	215	210	...	...
29	...	...	...	235	220	225	215	240	220	225	235	...	...
30	...	...	...	220	215	210	205	225	210	235	230	...	...
31	...	...	...	...c	...c	220	225	220	215	235	235	...	...
* MEAN	...	...	228	220	219	214	214	219	218	224	225	230	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 110

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1940 AUGUST 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	...e	0.7	0.7	p0.8c	p0.9c	1.0	0.8	p0.8c	0.7	0.8	0.6
2	...	0.6	p0.7	0.8	0.9	0.9	0.8	1.0	p1.0c	p0.9c	0.9	0.9	...e
3	...	0.7	0.7	0.7	p0.8c	p0.8c	0.9	0.8	0.9	0.9	0.8	0.7	0.6
4	...	...c	...c	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	...e
5	...	...e	0.7	0.8	0.8	0.8	1.0	0.8	p0.8c	p0.8c	0.7	0.7	...e
6	...	0.6	0.7	p0.8c	p0.9c	1.0	1.0	1.0	p0.9c	0.8	0.7	0.7	0.5
7	...	0.6	0.6	0.7	0.8	0.7	0.8	1.0	0.8	0.8	0.7	0.8	...e
8	...	...e	0.7	0.9	0.8	0.8	0.8	0.8	...c	...c	...c	0.6	...e
9	...	0.6	0.9	0.7	0.7	0.9	0.9	0.8	0.7	0.7	0.7	0.6	...e
10	...	...e	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	...e
11	...	...e	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7
12	...	0.7	0.5	0.6	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.6
13	...	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.7	...e
14	...	...e	0.7	p0.8c	p0.9c	0.9	0.8	0.8	0.8	0.7	0.7	0.8	...e
15	...	0.6	0.8	p0.8c	0.8	0.9	1.0	0.8	0.7	0.8	0.7	0.8	0.6
16	...	0.7	p0.7	0.7	0.7	0.8	0.9	0.7	1.0	0.9	0.7	0.8	0.7
17	...	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.6
18	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	p0.7	...c	...c	...c	...e
19	...	0.7	0.9	0.9	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.8	0.6
20	...	0.7	0.8	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.8	0.6
21	...	...e	0.7	0.7	0.9	p0.8c	0.7	0.7	0.8	0.7	0.7	0.8	0.6
22	...	0.7	0.7	0.7	0.9	0.8	0.9	0.8	0.8	0.8	0.7	0.6	...e
23	...	...e	0.8	0.8	0.8	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.6
24	...	0.5	0.7	0.7	0.7	p0.8c	0.8	0.8	0.8	0.7	0.6	0.6	0.5
25	...	0.6	0.8	...c	...c	...c	...c	...c	...c	...c	...c	0.7	0.7
26	...	0.7	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...e
27	...	0.7	0.7	0.8	0.8	0.8	0.8	...c	...c	...c	0.7	0.7	0.8
28	...	0.7	0.6	0.7	0.7	0.8	0.9	0.8	0.8	0.9	0.7	0.7	...e
29	...	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
30	...	...c	...c	1.3	1.3	1.3	1.3	1.3	1.3	1.2	0.8	0.8	0.6
31	...	0.7	0.8	p0.8c	p0.8c	0.8	0.9	0.9	0.8	0.7	0.7	0.8	...e
MEAN*	...	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.8	2.6	2.8	p3.1c	p3.2c	3.4	3.3	p3.2c	2.8	2.6	2.0	...
2	...	1.8	p2.5c	2.8	3.1	3.2	3.4	3.3	p3.2c	p3.0c	2.7	2.1	...
3	...	1.8	2.4	2.9	p3.0c	p3.1c	3.2	3.2	3.4	3.0	2.6	2.0	...
4	...	...	...	3.0	3.3	3.3	p3.4c	3.5	3.2	3.0	2.6	2.0	...
5	...	...	...a	2.9	3.2	3.3	3.3	3.3	p3.1c	p3.0c	2.8	2.1	...
6	...	1.9	2.5	p2.9c	p3.1c	3.3	3.5	3.3	p3.2c	3.0	2.9	2.1	...
7	...	2.0	2.7	3.1	3.2	3.5	3.4	3.4	3.4	3.2	2.5	2.2	...
8	...	1.9	2.5	2.9	3.1	3.3	p3.3a	3.3	...c	...c	...c	2.1	...
9	...	...	2.5	3.0	3.5	3.4	3.6	3.7	3.0	p3.0a	2.9	2.2	...
10	...	1.9	2.5	3.0	3.2	3.4	3.3	3.3	3.0	3.0	2.7	2.2	...
11	...	2.0	2.7	3.0	3.2	3.4	3.5	3.4	3.3	3.2	2.6	2.3	...
12	...	2.0	2.7	3.0	3.3	3.5	3.5	3.5	3.5	3.1	3.1	2.2	...
13	...	1.9	2.8	3.0	3.3	3.5	3.6	3.5	3.4	3.1	2.9	2.4	...
14	...	2.2	2.7	p3.0c	p3.2c	3.3	3.3	3.2	3.4	3.2	2.8	2.1	...
15	...	2.1	2.6	3.0	3.2	3.4	3.3	3.4	3.6	3.2	p2.8a	2.3	...
16	...	2.1	2.9	3.1	3.3	3.5	3.8	3.5	3.4	p3.1c	2.8	2.3	...
17	...	2.2	2.8	3.1	3.5	3.8	3.9	3.6	3.3	3.3	2.8	2.3	...
18	...	1.8	2.5	3.0	3.3	3.5	3.5	3.5	p3.5	p3.2c	2.9	...c	...
19	...	2.1	2.7	3.0	3.3	3.4	3.7	3.6	3.5	3.1	2.8	2.2	...
20	...	2.3	2.8	3.0	3.3	3.8	3.7	3.4	3.4	3.3	2.8	2.3	...
21	...	...	2.6	3.0	3.4	p3.6c	3.8	3.6	3.5	3.3	2.8	2.2	...
22	...	2.0	2.7	3.1	3.4	3.5	3.6	3.5	3.5	3.2	2.7	2.7	...
23	...	2.0	2.8	3.1	3.3	3.4	3.6	3.5	3.4	3.2	2.8	2.2	...
24	...	2.2	2.6	3.3	3.5	p3.6c	3.6	3.4	3.5	3.3	3.0	2.3	...
25	...	2.3	2.7	...c	...c	...c	...c	...c	...c	...c	...c	2.3	...
26	...	2.2	2.7	3.1	3.3	3.4	3.7	3.7	3.4	3.0	2.9	2.3	...
27	...	2.3	2.6	3.1	3.4	3.6	3.5	...c	...c	...c	2.7	2.2	...
28	...	2.2	2.7	3.1	3.6	3.7	3.7	3.6	3.5	3.3	2.9	2.5	...
29	...	2.3	2.8	3.1	3.5	3.7	3.6	3.3	3.2	3.3	2.9	2.3	...
30	...	...c	...c	3.3	3.3	3.6	3.7	3.7	3.7	3.4	3.1	2.3	...
31	...	2.3	2.8	p3.1c	p3.4c	3.7	3.6	3.8	3.6	3.3	3.1	2.4	...
MEAN*	...	2.1	2.7	3.0	3.3	3.5	3.5	3.5	3.4	3.2	2.8	2.2	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 111

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1940 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND SEPTEMBER 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.3	4.3	4.2	4.3	4.3	4.3	4.7	6.9	7.9	9.1	9.8	9.8	10.5	10.8	11.1	9.6	9.5	9.8	9.5	8.2	6.5	5.6	5.5	5.3	7.3
2	5.5	5.5	5.5	5.0	4.8	4.7	4.9	p7.0c	9.0	9.0	9.4	10.2	9.5	10.0	9.5	9.4	8.4	7.8	7.5	7.4	6.8	6.2	5.6	5.5	7.2
3	4.8	5.0	4.9	4.7	4.8	5.0	5.0	6.9	7.3	8.0	8.8	10.2	10.4	10.3	9.7	9.5	8.9	9.8	9.5	7.0	6.0	5.0	4.2	4.2	7.1
4	4.3	4.3	4.3	4.3	4.0	4.0	4.0	6.3	7.4	9.5	8.8	9.0	9.5	10.6	10.0	10.1	9.6	8.7	8.2	7.2	6.0	6.1	5.5	5.2	7.0
5	4.1	3.4	3.6	3.8	4.0	4.1	4.2	6.7	...c	7.9	7.9	8.4	8.5	9.2	...c	...c	...c	8.4	7.3	7.2	6.2	5.3	4.9	5.1	...
6	4.8	4.3	3.9	3.8	3.6	3.8	4.3	7.0	8.0	8.3	9.7	9.4	9.5	10.4	10.1	9.7	9.3	9.2	8.5	7.4	5.8	5.8	4.7	4.8	6.9
7	4.4	4.3	4.2	4.1	4.1	4.2	4.5	p7.1c	7.9	9.2	9.4	9.2	9.9	10.0	10.5	10.7	10.5	9.3	8.1	7.2	6.4	6.0	5.2	4.8	7.1
8	4.7	4.7	4.7	4.4	4.1	3.5	4.5	7.2	8.0	10.1	9.7	10.1	10.8	9.3	9.5	9.7	9.6	8.7	8.7	8.3	6.0	5.1	4.8	4.7	7.1
9	4.8	4.6	4.5	4.5	4.2	3.9	4.0	6.8	7.9	9.1	9.6	10.2	10.2	10.3	9.8	8.7	8.5	7.5	8.8	7.7	6.6	6.0	5.0	4.6	7.0
10	4.5	4.1	3.9	3.9	3.5	3.4	4.1	6.6	7.9	8.5	10.1	10.0	9.5	9.2	9.5	9.6	9.0	9.0	8.3	7.0	6.2	6.0	5.0	4.2	6.8
11	4.0	4.1	4.1	4.2	3.8	3.7	4.3	6.7	7.8	8.3	9.0	9.0	8.4	8.8	9.0	9.0	8.4	8.1	8.0	7.0	6.1	5.4	4.4	4.0	6.5
12	3.7	3.6	3.4	3.4	3.2	3.0	3.5	6.5	7.9	8.8	9.5	9.5	9.4	9.5	9.0	8.5	8.0	8.0	8.0	7.4	6.6	5.2	4.8	4.3	6.4
13	4.0	3.7	3.8	3.8	3.5	3.3	3.9	6.3	7.9	8.6	8.4	9.0	9.9	9.3	9.0	8.5	8.2	7.5	7.4	7.1	5.3	5.0	4.6	4.3	6.4
14	4.3	4.0	4.0	4.0	3.8	3.7	4.6	6.8	7.7	8.3	8.6	9.4	9.3	9.4	9.5	8.7	8.8	8.0	7.9	6.8	5.3	5.3	5.0	4.7	6.6
15	4.5	4.4	4.6	3.7	3.6	4.0	4.2	7.3	7.5	7.0	8.3	10.2	11.3	11.0	9.5	9.2	8.3	8.0	7.3	6.2	5.9	5.0	4.8	4.8	6.7
16	4.7	4.6	4.8	4.3	4.4	4.3	4.9	6.7	7.3	8.7	8.4	9.0	9.5	9.2	8.9	8.0	8.0	7.7	7.4	6.2	5.5	5.5	5.3	5.0	6.6
17	5.0	5.1	5.1	4.8	3.3	3.0	3.7	6.1	8.2	9.4	9.4	9.2	9.6	8.7	8.4	7.7	6.8	7.0	7.0	6.3	5.7	5.0	4.8	4.6	6.4
18	4.5	4.0	4.0	4.0	3.7	4.0	4.7	6.3	8.0	7.5	8.3	8.8	9.2	8.8	8.3	8.4	8.4	8.4	7.9	6.8	5.5	5.6	5.0	4.9	6.5
19	4.8	4.8	4.3	4.0	4.0	4.0	4.5	7.4	8.4	9.4	9.5	9.4	9.6	9.9	9.5	9.1	9.1	8.6	8.2	7.5	6.3	6.2	5.8	5.6	7.1
20	5.2	5.0	5.2	4.5	4.2	4.2	5.0	7.4	8.3	9.6	9.3	10.0	9.8	10.6	9.8	9.9	9.7	p9.1	8.7	7.8	6.7	6.3	6.0	5.7	7.4
21	...c	...c	...c	5.6	5.0	5.0	5.6	7.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	8.4	8.2	6.9	6.2	6.0	5.3	...
23	5.4	5.2	5.2	5.1	4.8	4.6	5.7	7.3	8.0	8.6	9.0	9.5	10.5	10.3	9.8	9.1	8.8	8.4	8.4	7.6	6.8	6.3	6.1	6.1	7.4
24	6.0	5.8	5.5	5.0	5.0	4.9	6.0	7.6	8.3	9.0	p9.5c	10.0	10.4	10.6	p10.2c	9.8	9.8	8.3	7.8	7.2	6.6	6.2	5.7	5.5	7.6
25	5.0	4.8	4.3	3.6	3.3	3.3	4.4	7.6	9.1	9.4	10.2	11.3	10.7	11.2	10.3	9.7	10.2	9.6	9.3	8.6	7.0	6.8	6.5	6.2	7.6
26	6.2	4.6	4.0	4.0	4.3	4.6	6.1	8.0	8.2	8.6	10.4	11.3	10.5	10.0	9.2	8.9	9.1	9.2	8.4	7.6	7.1	6.6	6.1	5.2	7.4
27	5.0	4.8	3.8	2.6	2.4	3.6	6.5	7.4	8.9	7.1	9.0	11.0	12.0	12.6	11.3	10.0	8.8	8.1	7.8	7.6	6.5	6.2	5.8	4.9	7.2
28	4.7	4.2	4.9	4.2	4.1	4.3	5.4	7.0	8.4	8.2	9.4	9.8	10.8	10.2	10.0	9.7	9.9	9.3	9.5	8.5	6.5	6.1	5.0	4.6	7.3
29	4.3	4.3	4.0	4.0	4.0	4.2	5.6	6.8	8.0	8.6	8.6	8.6	10.1	9.8	8.6	8.2	8.3	8.0	7.6	6.8	6.0	5.5	5.0	5.0	6.7
30	4.9	4.5	4.4	3.8	3.5	3.4	4.6	6.4	7.6	8.2	8.8	9.8	10.2	10.0	9.0	8.6	8.4	8.0	8.1	7.1	6.2	5.7	5.6	5.5	6.8
31																									
MEAN*	4.7	4.5	4.4	4.1	3.9	4.0	4.7	7.0	8.0	8.6	9.2	9.7	10.0	10.0	9.6	9.2	8.9	8.5	8.2	7.3	6.2	5.8	5.2	5.0	6.9

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 112

SEPTEMBER 1940 SEPTEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	255	270	265	250	255	265	250	230	240	270	270	260	290	290	275	260	250	250	230	225	230	245	280	280	258
2	275	270	240	230	255	265	280	255	265	250	265	275	280	290	260	300	240	240	240	245	250	245	265	250	260
3	280	265	260	275	275	270	235	240	230	260	280	290	290	285	295	315	265	260	230	225	225	225	260	295	264
4	265	255	260	250	255	255	255	225	240	280	260	285	290	290	255	280	250	245	240	235	255	240	245	265	257
5	230	245	265	270	275	275	260	250	250	...c	260	300	280	315	...c	...c	...c	230	230	235	235	240	265	240	...
6	235	245	265	255	285	280	220	235	240	255	280	290	290	290	270	280	250	250	230	220	240	235	265	250	256
7	250	275	270	260	265	260	270	245	260	265	270	290	280	300	300	295	250	230	220	235	240	260	255	270	263
8	275	270	260	240	240	260	250	240	255	260	265	250	285	260	265	260	240	240	230	225	210	255	270	265	253
9	255	260	270	260	235	255	265	245	245	270	280	275	280	280	270	270	240	235	240	220	240	225	230	250	254
10	250	260	265	240	265	270	255	245	250	265	260	265	265	270	270	270	260	240	220	220	215	240	225	235	250
11	250	265	250	235	220	255	250	235	250	260	270	260	270	275	285	275	265	240	230	225	230	240	230	245	250
12	260	285	265	250	230	255	250	235	230	270	285	265	280	270	280	260	255	245	230	230	215	240	240	230	252
13	245	265	255	240	225	250	245	230	250	265	260	280	270	260	265	260	255	235	230	215	220	245	230	240	247
14	250	250	255	240	240	250	250	245	240	250	310	285	270	290	240	260	260	245	225	210	220	245	245	235	250
15	235	260	250	255	305	275	285	250	240	p260c	290	290	270	275	280	255	270	250	230	215	230	240	255	265	260
16	245	270	245	245	250	250	265	240	250	275	290	270	280	295	275	270	270	245	230	220	240	235	240	280	258
17	275	255	245	215	240	280	255	265	260	270	270	270	275	270	265	255	245	245	240	215	235	240	245	285	255
18	275	245	245	240	255	260	245	250	250	280	290	285	310	280	310	280	280	265	220	220	235	255	250	255	262
19	250	245	220	240	255	245	255	230	250	260	280	270	290	290	275	280	270	240	230	220	210	245	245	240	251
20	245	235	215	210	235	235	245	235	245	260	265	280	290	295	280	280	265	p235c	230	220	225	250	255	260	250
21	280	260	250	230	245	270	270	250	280	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	235	240	225	255	235	245	...
23	270	260	250	240	250	275	240	240	250	275	290	300	300	280	285	280	265	245	240	225	225	240	260	260	260
24	260	255	240	240	p240a	p245a	245	245	260	285	p295c	300	300	280	p290c	295	275	235	225	235	230	265	255	245	260
25	260	255	235	225	290	285	260	265	250	260	280	295	290	290	275	300	260	250	230	225	230	270	290	270	264
26	230	270	290	290	310	280	240	235	255	290	285	280	285	270	260	265	280	265	230	225	235	245	235	245	262
27	250	250	245	370	365	330	245	255	280	260	320	310	315	280	260	250	235	240	245	240	225	270	245	265	275
28	265	255	265	285	280	280	250	245	245	310	320	310	310	285	295	290	275	250	235	225	225	255	260	270	270
29	265	270	285	305	265	325	275	250	285	280	275	300	300	290	280	270	260	245	240	230	245	265	260	295	273
30	270	260	260	270	300	290	265	240	275	280	300	290	300	275	280	270	265	250	235	225	230	265	255	265	267
31																									
MEAN*	256	259	255	254	263	269	254	243	251	269	281	283	287	283	276	275	261	244	232	226	230	247	252	259	259

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 113

SEPTEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1940

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	5.0	5.2	5.2	5.5	5.4	5.2	5.0	...	...	...
2	...	3.4	3.8	4.7	5.0	5.1	5.2	5.3	4.9	5.2	...	...	...
3	...	...	4.1	4.3	5.0	5.2	5.1	5.3	5.1	5.1	4.2	...	...
4	...	...	3.7	5.1	5.0	5.2	5.4	5.0	5.0	5.0	4.3	...	...
5	...	3.3	4.1	4.7	4.8	5.0	5.0	5.0	...c	...c	...	...	...
6	...	...	...	4.3	4.7	5.1	5.0	4.8	4.8	4.7	...	...	...
7	...	...	4.3	4.7	5.0	5.0	5.0	5.1	5.0	5.0	3.8	...	...
8	...	...	4.2	4.5	4.8	5.0	5.2	4.8	4.8	4.7	3.9	...	...
9	...	...	4.1	4.4	4.9	5.0	5.1	5.0	4.8	4.4	3.8	...	...
10	...	...	4.1	5.0	5.1	5.0	5.1	5.0	4.9	4.7	3.8	...	...
11	...	...	4.3	4.8	5.0	4.9	4.9	4.9	4.9	4.8	4.4	3.2	...
12	...	...	4.3	4.8	4.9	4.8	4.9	4.8	4.9	4.7	4.2	...	...
13	...	...	4.5	5.0	4.8	4.9	5.0	4.9	4.6	4.8	4.3	...	...
14	...	3.5	4.3	4.7	5.0	5.0	5.1	4.9	4.8	4.8	4.2	...	...
15	...	3.6	4.2	4.2	5.1	5.2	5.0	p4.7c	4.4	4.5	4.0	3.1	...
16	...	...	4.3	4.6	4.8	5.2	4.8	5.0	4.9	4.4	4.3	...	...
17	...	3.6	4.4	4.7	4.8	4.9	4.8	5.0	4.8	4.6	3.8	...	...
18	...	3.3	4.5	4.8	5.2	5.0	5.2	5.0	5.1	4.8	4.6	3.3	...
19	...	3.7	4.4	4.8	5.0	5.2	5.1	5.1	5.0	5.1	4.6	...	...
20	...	...	4.8	5.0	5.1	5.2	5.4	5.3	5.5	4.9	4.6	...	...
21	...	3.9	5.5	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	4.4	5.1	5.3	5.6	5.0	5.2	5.4	5.0	4.4	3.1	...
24	...	...	4.8	5.0	p5.1c	5.2	5.1	5.3	p5.4c	5.3	4.6	3.2	...
25	...	4.2	4.6	4.9	5.5	5.1	5.4	5.4	5.0	4.9	4.5	...	...
26	...	3.6	4.4	5.0	4.8	5.0	5.3	5.0	5.1	4.6	4.8	...	...
27	...	3.7	p5.4	4.5	5.0	5.3	5.5	5.2	5.0	4.3	3.8	...	...
28	...	...	4.3	5.0	5.5	5.3	5.2	5.1	4.7	4.6	3.9	2.9	...
29	...	3.5	4.7	4.8	4.9	4.9	4.8	5.0	4.9	4.6	3.9	3.3	...
30	...	...	4.5	4.8	5.0	5.3	5.3	5.0	5.0	4.6	4.0	...	...
31													
MEAN*	...	3.6	4.4	4.8	5.0	5.1	5.1	5.0	5.0	4.8	4.2	3.2	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	240	220	215	220	205	205	240	...	...	...
2	...	...	225	235	220	220	210	220	205	210	...	...	...
3	...	...	220	220	230	235	205	220	230	220	230	...	...
4	...	...	230	210	230	205	210	210	240	220	235	...	...
5	...	...	225	235	220	215	220	205	...c	...c	...c	...	...
6	...	...	...	230	220	225	230	215	225	230	...	...	...
7	...	...	235	220	220	220	220	220	220	230	240	...	...
8	...	...	225	225	215	200	200	215	210	220	210	...	...
9	...	...	220	220	210	210	205	220	200	210	215	...	...
10	...	...	235	200	220	220	215	205	200	225	215	...	...
11	...	...	240	235	220	205	210	210	200	220	230	240	...
12	...	...	225	220	225	215	210	215	210	230	215	...	...
13	...	...	230	220	210	200	p200a	200	210	210	230	...	...
14	...	240	225	220	225	220	220	180	185	230	210	...	...
15	...	245	225	p220c	250	200	245	p210c	190	220	215	245	...
16	...	...	225	210	210	230	180	205	225	220	230	...	...
17	...	240	235	215	220	p210a	200	230	190	205	210	...	...
18	...	235	210	220	200	205	220	210	215	215	240	255	...
19	...	225	230	220	210	200	200	210	215	200	225	...	...
20	...	...	230	220	210	200	220	215	225	225	220	...	...
21	...	250	230	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	...
23	...	...	235	225	215	210	205	235	240	205	220	240	...
24	...	...	230	215	p210c	210	190	240	p235c	205	235	235	...
25	...	245	235	220	205	210	215	225	200	220	235	...	...
26	...	230	225	200	200	205	220	210	200	210	230	...	...
27	...	245	220	225	215	205	195	220	220	205	220	...	...
28	...	...	235	220	205	210	200	210	205	220	220	240	...
29	...	235	240	230	220	200	200	200	220	220	230	240	...
30	...	...	225	215	200	195	260	230	200	220	220	...	...
31													
MEAN*	...	238	228	221	216	211	212	214	212	218	224	242	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 114

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.7	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.9	0.7	0.6
2	...	0.6	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7
3	...	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.6	0.7
4	...	0.8	0.7	0.8	0.9	0.9	1.0	0.9	0.8	0.9	0.8	0.7	0.6
5	...	0.6	0.9	0.6	0.8	0.8	0.8	0.8	...c	...c	...c	0.7	0.6
6	...	0.8	1.0	0.8	0.7	0.9	0.9	0.8	0.7	0.9	0.7	0.6	0.6
7	...	0.7	0.7	0.8	0.8	0.9	0.7	0.8	0.9	0.9	0.7	0.6	0.6
8	...	0.6	0.6	0.8	0.9	0.9	0.8	0.9	0.7	0.7	0.7	0.7	0.6
9	...	0.5	0.7	0.7	0.8	0.8	1.0	0.8	0.8	0.7	0.6	0.7	0.6
10	...	0.6	0.7	0.7	0.7	0.7	0.9	0.8	0.7	0.8	0.7	0.6	...e
11	...	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.7	0.8	0.7	0.5
12	...	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.7
13	...	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.6
14	...	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6
15	...	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.7
16	...	0.6	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.7	0.7	0.7	0.7
17	...	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6
18	...	0.7	0.8	0.8	0.8	0.7	1.0	1.0	0.8	0.7	0.8	0.7	0.6
19	...	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.7
20	...	0.8	0.9	1.0	1.0	1.0	0.8	1.0	0.9	0.9	0.8	p0.7c	0.8
21	...	0.5	0.6	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	0.9
23	...	0.7	0.9	0.8	1.0	1.0	1.0	0.8	1.0	0.9	0.8	0.7	0.9
24	...	0.6	0.7	0.8	p0.8c	0.9	1.0	1.0	p1.0c	0.9	0.7	0.7	0.6
25	...	0.7	0.7	0.8	1.0	1.0	1.0	0.8	0.9	0.8	0.7	0.7	0.6
26	...	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.6	0.5
27	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	...e
28	...	0.7	0.8	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.6
29	...	0.6	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6
30	...	0.7	0.9	0.7	0.9	1.0	0.8	0.8	0.8	0.8	0.8	0.6	0.6
31													
MEAN*	...	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.6

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.2	2.3	3.0	3.2	3.5	3.5	3.7	3.8	3.4	3.0	3.2	2.5	1.4
2	1.1	2.2	2.6	3.0	3.3	3.5	3.7	3.7	3.4	3.2	3.0	2.4	1.5
3	1.3	2.2	2.8	3.2	3.4	3.5	3.7	3.5	3.4	3.1	2.5	2.0	1.4
4	...	2.2	2.6	3.1	3.4	3.6	3.5	3.5	3.4	3.4	3.0	2.4	1.5
5	1.2	2.2	2.8	3.0	3.3	3.5	3.4	3.5	...c	...c	...c	2.2	1.4
6	1.1	2.2	2.8	3.2	3.4	3.6	3.5	3.3	3.3	3.4	3.0	2.3	1.4
7	1.3	2.3	2.9	3.1	3.4	3.4	3.7	3.4	3.4	3.3	2.9	2.3	1.5
8	1.2	2.3	2.9	3.2	3.4	3.5	3.4	3.3	3.1	3.3	2.9	2.2	1.5
9	1.3	2.3	2.8	3.1	3.3	3.4	3.6	3.6	3.4	3.2	2.8	2.1	1.4
10	1.3	2.3	2.7	3.1	3.5	3.5	3.6	3.6	3.4	3.3	2.9	2.3	1.2
11	1.4	2.2	2.8	3.2	3.4	3.4	3.5	3.4	3.4	3.3	2.9	2.4	1.7
12	1.2	2.3	2.8	3.1	3.4	3.3	3.5	3.5	3.4	3.3	2.9	2.3	1.5
13	1.5	2.5	3.0	3.1	3.5	3.5	3.6	3.5	3.4	3.3	2.9	2.4	...
14	1.4	2.2	2.8	3.1	3.5	3.5	3.6	3.5	3.5	3.1	2.7	2.3	1.4
15	1.3	2.4	2.8	3.2	3.3	3.3	3.4	3.6	3.3	3.2	2.8	2.3	1.4
16	1.0	2.2	2.8	3.1	3.4	3.5	3.4	3.5	3.4	3.3	3.0	2.3	1.5
17	1.2	2.3	2.8	3.0	2.9	2.8	3.5	3.5	3.4	3.3	2.9	2.4	1.5
18	1.5	2.5	3.0	3.2	3.2	3.7	3.8	3.8	3.6	3.5	3.1	2.4	1.6
19	1.1	2.4	3.0	3.3	3.6	3.6	3.7	3.7	3.6	3.5	3.0	2.4	1.5
20	1.8	2.5	3.0	3.4	3.5	3.7	3.7	3.8	3.6	3.5	3.1	2.4	1.8
21	...	2.4	3.0	...	...	...	...	...	...	...	...	...	...
22	...	...	...	...	...	...	...	...	...	...	...	...	1.8
23	1.8	2.6	3.0	3.4	3.5	3.6	3.6	3.6	3.6	3.4	3.1	2.5	1.6
24	1.8	2.6	3.0	3.3	p3.3c	3.4	3.7	3.9	p3.6c	3.3	3.4	2.5	...
25	1.8	2.7	3.0	3.2	3.4	3.7	3.8	3.7	3.7	3.0	2.7	2.3	1.5
26	1.3	2.4	2.8	2.6	3.4	3.5	3.7	3.6	3.5	3.3	3.0	2.4	1.4
27	1.3	2.4	2.9	3.2	3.4	3.6	3.6	3.6	3.4	3.1	2.9	2.4	1.7
28	1.4	2.4	2.9	3.2	3.4	3.5	3.3	3.5	3.4	3.3	2.9	2.2	1.4
29	1.2	2.4	2.9	3.2	3.4	3.5	3.6	3.6	3.5	3.3	3.0	2.4	1.8
30	...	2.4	2.9	3.2	3.3	3.5	3.6	3.5	3.4	3.2	2.8	2.4	1.7
31													
MEAN*	1.4	2.4	2.9	3.2	3.4	3.5	3.6	3.6	3.4	3.3	2.9	2.3	1.5

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 115

OCTOBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1940

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.9	4.4	4.1	3.7	3.4	3.5	5.2	7.2	7.8	8.2	9.0	9.6	10.2	10.7	10.1	9.5	9.0	8.5	8.0	7.7	7.7	7.0	6.6	6.3	7.2
2	5.5	4.9	4.3	3.9	3.6	3.6	4.7	6.7	8.1	8.4	8.0	8.4	8.7	9.5	8.7	7.9	7.6	7.5	7.1	6.7	6.2	6.2	5.7	5.5	6.6
3	5.2	p5.0a	4.7	4.3	4.4	4.6	5.3	6.3	6.8	7.3	8.1	[illegible].7	9.0	9.4	9.3	9.5	8.8	8.3	8.2	7.0	6.5	5.9	5.6	5.6	6.8
4	5.5	4.5	4.1	3.8	3.8	3.9	5.5	6.8	7.3	8.0	7.6	8.6	9.7	9.3	9.5	8.9	8.1	7.1	6.7	6.6	5.8	5.1	5.0	4.9	6.5
5	4.7	4.4	4.0	3.5	3.5	3.5	5.3	6.5	7.2	7.3	8.2	8.8	9.3	9.9	9.9	10.0	9.6	9.1	8.3	7.3	6.5	6.2	5.7	5.6	6.8
6	5.5	5.5	5.2	4.2	3.8	3.7	5.4	6.4	7.5	7.7	8.4	9.5	10.5	10.6	10.1	9.8	9.4	9.5	9.5	7.8	6.7	6.3	5.6	5.6	7.3
7	5.8	5.2	5.1	4.7	4.6	4.7	5.5	6.2	6.6	6.7	7.2	8.4	8.1	8.1	...c	...c	...c	7.6	7.4	6.8	6.6	6.0	6.3	6.2	...
8	5.3	5.0	4.5	3.8	3.9	3.9	5.0	p7.0c	7.6	8.0	9.2	10.2	10.0	10.5	11.0	9.1	8.8	7.5	7.4	7.2	5.5	4.7	4.3	3.7	6.8
9	3.1	3.4	3.6	3.3	2.8	3.2	3.8	4.2	...c	...c	...c	...c	...c	6.6	6.8	7.5	6.9	6.7	6.5	5.5	5.0	4.5	4.2	4.0	...
10	3.6	3.3	2.6	2.2	2.2	2.2	4.9	6.7	6.8	7.6	8.1	8.7	8.9	9.0	8.9	8.7	8.2	8.0	8.2	7.5	6.3	5.5	5.2	4.8	6.2
11	4.9	4.8	4.2	3.2	2.8	2.9	5.3	7.9	8.5	8.7	8.8	8.8	9.2	8.8	8.6	8.9	8.9	8.5	7.9	7.1	6.2	5.5	5.1	5.2	6.7
12	5.0	5.0	4.5	3.8	3.5	3.7	5.7	7.3	8.1	9.2	9.1	9.5	9.8	9.9	9.5	9.1	8.3	8.0	8.5	8.0	7.5	6.8	6.7	6.1	7.2
13	3.5	4.7	4.2	3.9	3.9	4.0	5.5	7.5	9.1	p9.4c	9.6	9.8	10.0	10.2	9.7	9.5	9.4	9.1	9.0	8.0	6.8	6.5	6.4	5.9	7.3
14	6.0	5.6	4.8	4.1	3.9	4.2	5.9	8.2	9.2	9.7	9.7	10.0	10.3	10.1	10.1	9.6	9.5	9.5	9.3	8.5	7.8	6.9	6.6	6.3	7.7
15	5.9	5.6	4.8	4.3	4.2	4.3	p6.5c	7.8	9.1	9.6	10.0	10.4	10.2	10.3	10.2	9.8	10.3	10.2	9.5	8.5	8.0	7.0	6.7	6.7	7.9
16	6.6	6.2	5.3	4.5	4.3	4.4	5.6	p7.0c	7.5	8.0	8.7	9.7	9.9	9.9	9.8	9.2	8.9	9.1	8.9	8.2	7.5	7.1	6.5	5.8	7.4
17	5.3	5.2	5.1	4.8	4.7	4.9	6.1	6.6	6.0	6.1	6.4	6.8	7.2	7.0	7.2	6.9	6.7	6.8	6.5	6.6	6.2	5.5	5.2	4.8	6.0
18	4.4	4.5	4.2	3.9	3.6	3.7	5.5	6.9	7.8	8.5	9.0	9.6	9.8	9.8	9.2	9.0	8.3	9.2	8.5	8.6	7.6	6.6	5.9	5.6	7.1
19	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.6	6.6	6.3	6.3	6.5	6.5	6.2	6.1	6.2	6.1	6.0	5.5	5.2	5.3	5.2	...
20	5.3	5.0	4.6	4.6	4.3	4.4	5.3	5.8	6.4	6.7	6.8	6.9	7.1	7.6	7.3	7.3	7.3	7.3	6.8	6.5	6.2	6.0	6.1	5.8	6.1
21	5.5	5.2	4.8	4.4	4.4	4.6	6.5	7.5	8.0	9.1	10.1	10.5	10.2	10.2	10.2	9.6	9.5	9.4	8.5	7.1	6.1	6.1	6.0	6.0	7.5
22	5.7	5.4	4.7	4.1	4.0	4.0	5.0	5.7	6.2	6.5	7.5	8.5	9.9	9.6	9.3	9.0	9.1	8.5	7.9	7.1	6.0	5.6	5.6	5.9	6.7
23	6.3	6.3	4.7	4.0	3.6	3.8	5.9	7.5	8.4	9.2	9.5	10.3	10.8	10.1	10.0	10.5	10.0	9.8	8.9	8.0	7.3	6.7	6.2	5.9	7.6
24	6.1	6.1	5.6	4.7	4.2	3.9	5.3	6.3	7.3	7.7	3.5	9.6	10.4	10.7	10.8	10.6	10.1	10.0	9.7	8.2	7.5	6.9	6.7	6.8	7.6
25	6.5	5.6	4.9	4.8	4.3	4.3	6.1	7.1	7.7	8.5	9.2	9.6	10.1	10.5	10.3	10.1	10.0	10.1	9.5	8.0	7.5	7.2	6.9	7.1	7.8
26	6.7	6.1	5.7	5.6	5.4	5.0	6.6	6.9	7.9	9.9	10.3	10.0	9.8	10.4	10.2	10.2	9.9	9.7	9.3	8.2	7.7	7.3	6.8	6.6	8.0
27	5.8	6.0	5.3	4.9	4.6	4.7	5.7	7.7	8.8	9.4	p9.0a	7.5	8.2	8.4	8.9	8.3	7.8	7.8	7.6	7.0	6.3	5.6	5.7	5.7	7.0
28	p5.0a	4.6	4.8	5.3	4.3	4.9	6.0	6.9	7.3	p8.2	9.4	9.5	10.2	10.9	10.1	10.2	9.3	9.6	8.9	8.6	8.0	6.4	5.7	5.7	7.5
29	5.5	5.2	5.0	4.8	4.5	4.8	6.4	7.1	7.2	8.0	7.9	8.2	8.6	9.2	3.8	9.0	8.0	7.9	7.7	7.3	6.5	6.8	6.4	6.2	7.0
30	5.9	5.0	4.8	4.3	4.3	4.5	p5.9	7.7	8.0	8.0	9.0	9.5	10.0	10.8	11.0	10.8	10.3	9.8	9.3	9.2	8.4	7.9	7.4	7.8	7.9
31	7.6	6.7	6.0	5.3	4.7	4.6	6.5	7.8	8.9	9.5	9.8	10.3	11.4	11.9	11.8	11.6	11.2	10.9	10.4	10.1	8.8	7.6	7.2	6.9	8.6
MEAN*	5.4	5.2	4.7	4.2	4.0	4.1	5.6	6.9	7.7	8.2	8.7	9.2	9.6	9.7	9.6	9.3	8.9	8.7	8.3	7.6	6.9	6.3	6.0	5.8	7.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 116

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — OCTOBER 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	235	245	240	300	270	250	250	265	280	305	315	305	310	285	295	260	250	240	245	255	255	255	230	265
2	255	260	245	315	330	305	195	235	255	265	290	305	300	295	280	280	275	240	240	230	250	255	260	275	268
3	280	p290a	300	285	285	255	265	270	300	285	310	325	315	310	315	290	280	250	235	245	255	255	260	265	280
4	230	240	250	285	310	295	265	245	260	275	305	320	300	310	290	290	260	265	225	250	245	280	285	270	273
5	275	255	270	275	285	290	250	260	275	300	300	310	305	300	295	280	270	250	240	245	265	265	285	280	276
6	280	260	230	240	265	255	225	235	265	280	310	295	295	290	285	285	275	260	235	235	245	260	265	270	264
7	p290a	300	310	330	285	265	260	285	310	340	410	335	365	380	...c	...c	...c	275	240	250	275	280	285	270	...
8	285	285	275	300	275	290	285	280	280	315	305	320	340	310	275	280	280	255	255	245	240	265	270	280	283
9	280	290	265	330	335	360	330	260	...	...	...	...	...	330	305	285	275	245	240	230	240	265	275	270	...
10	250	250	270	p300c	300	300	260	270	290	295	300	320	300	320	300	290	230	235	240	225	230	260	250	270	273
11	250	240	220	225	285	320	250	270	280	295	320	320	335	315	335	320	280	240	230	225	235	245	290	295	276
12	275	275	235	230	280	280	250	260	280	300	310	310	330	310	300	295	260	240	250	230	245	255	245	240	270
13	260	240	280	275	295	310	260	240	270	p280c	295	310	310	290	300	290	280	250	240	230	240	255	260	275	272
14	250	235	230	250	260	285	245	260	270	280	290	305	280	295	290	270	270	240	240	235	230	250	250	250	261
15	250	235	225	255	260	270	250	260	280	275	290	290	290	305	310	300	290	250	230	240	225	255	275	255	265
16	250	245	220	250	300	300	270	285	290	300	330	310	310	310	300	300	p280	250	250	230	250	240	250	265	274
17	270	265	270	285	290	330	280	280	330	385	430	425	390	415	390	365	365	310	260	250	240	250	250	270	316
18	280	275	255	260	265	280	250	265	280	310	300	310	325	300	330	295	320	245	245	235	230	235	270	330	279
19	...c	...c	...c	...c	...c	...c	...c	...c	...c	390	430	440	445	440	410	420	400	340	280	250	250	280	300	p290a	...
20	270	255	270	260	280	320	260	370	330	330	390	395	400	350	350	365	320	280	240	240	250	265	270	260	305
21	265	260	p265a	270	p275a	280	245	230	280	295	290	310	300	320	310	290	300	265	230	220	230	p270a	300	250	273
22	255	245	250	280	250	270	245	310	340	410	350	350	330	310	330	330	285	235	240	230	240	310	320	310	293
23	290	270	p275a	p275a	280	300	245	260	270	260	290	290	275	300	290	280	280	250	230	230	235	245	260	280	269
24	280	240	250	250	250	245	230	250	270	285	295	310	300	285	290	275	275	255	235	215	230	270	p270a	265	263
25	245	240	260	250	280	250	235	225	250	295	290	310	300	290	300	290	280	260	240	235	245	250	265	270	265
26	255	255	270	270	270	300	235	265	350	320	290	310	300	300	300	290	275	260	240	260	260	260	300	p295a	280
27	p290c	270	275	265	245	215	220	230	280	320	250	400	350	360	330	280	290	280	235	p240a	240	260	280	p275a	278
28	p270a	260	p260a	260	220	280	250	225	p270c	310	310	310	p300a	290	330	290	290	265	260	250	240	225	p260a	290	271
29	260	p260a	260	245	245	270	250	250	300	310	325	370	360	350	350	295	285	270	240	240	260	275	285	260	284
30	250	250	250	250	p250c	250	p225	240	260	300	315	320	325	320	310	295	290	265	235	250	260	p270a	280	270	272
31	260	p260a	265	260	260	255	250	255	265	280	290	320	315	300	290	285	280	250	250	230	225	245	255	275	268
MEAN*	264	258	258	269	277	283	251	261	284	303	313	325	319	316	309	296	283	256	240	237	244	259	274	272	277

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 117

OCTOBER 1940 — OCTOBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.0	4.5	4.7	5.4	5.1	5.0	5.1	4.9	4.8	4.4	...	...
2	...	3.9	4.3	4.3	4.8	5.1	5.0	5.1	4.9	4.4	4.5	...	...
3	...	4.0	4.8	4.8	5.0	4.9	5.0	5.0	5.0	4.7	4.4	3.1	...
4	3.1	4.0	4.4	4.7	4.8	5.2	5.1	5.0	5.0	4.3	4.4	...	...
5	...	4.2	4.7	4.8	5.0	5.2	5.2	p5.0a	4.8	4.9	...a	...a	...
6	...	...	4.6	4.8	5.2	5.3	5.2	5.2	5.5	5.0	4.7	4.0	...
7	...	4.0	4.8	5.4	4.9	5.1	5.2	5.0	...c	...c	...c	4.0	...
8	...	3.9	4.2	5.2	5.1	5.0	5.4	4.9	4.8	4.6	4.3	3.7	...
9	...	...	...	4.2	4.4	4.4	4.5	4.8	4.8	4.9	4.1	...	...
10	...	4.2	4.7	5.1	5.0	5.2	5.2	5.2	4.9	4.8	...	...	...
11	...	4.2	4.6	4.9	5.0	5.3	5.5	5.0	5.0	5.2	4.7	...	...
12	...	4.3	4.7	5.0	5.0	5.3	5.2	5.3	5.1	4.8	3.7	...	...
13	...	...	4.9	p5.1c	5.3	5.5	5.3	5.3	5.4	4.8	4.5	...	...
14	...	4.4	4.8	p5.0a	5.1	5.1	4.8	5.0	5.0	4.8	4.3	...	...
15	...	4.3	4.9	5.1	5.4	5.1	5.3	5.4	5.4	5.3	4.6	...	...
16	...	4.2	4.8	5.0	5.3	5.3	5.4	5.3	5.1	5.0	4.4	...	...
17	3.3	4.1	4.7	4.8	5.0	5.1	4.9	5.0	5.0	5.0	5.0	4.0	...
18	...	4.1	4.6	5.2	4.9	5.4	5.6	5.1	5.6	4.8	4.8	...	...
19	...	...c	...c	4.6	4.8	5.0	4.9	4.8	4.9	5.0	4.7	3.9	...
20	...	4.3	4.8	4.8	4.9	5.0	5.1	5.1	5.0	5.1	4.8	4.0	...
21	...	...	4.8	5.0	5.0	5.5	5.4	5.6	5.2	4.7	4.9	3.7	...
22	...	4.3	4.5	4.9	4.9	5.1	5.0	5.0	5.0	4.9	4.3	...	...
23	...	4.3	4.8	4.8	5.0	5.1	5.5	5.2	5.0	5.1	4.3	3.6	...
24	...	3.8	4.4	5.0	5.1	5.3	5.2	5.1	5.1	5.0	4.5	3.9	...
25	...	...	4.5	5.1	5.1	5.2	5.0	5.1	5.0	5.1	4.6	4.0	...
26	...	4.1	5.1	5.1	5.0	5.4	5.1	5.2	5.1	...a	...a	...	...
27	...	...	...	...a	4.9	5.3	5.3	5.1	5.2	4.3	4.1	4.2	...
28	...	...	...	p5.0	...a	...a	...a	5.2	...a	4.9	4.6	...	...
29	...	3.9	4.8	4.9	4.9	5.2	5.1	5.1	4.9	4.8	4.3	...	...
30	...	3.9	4.5	5.0	5.3	5.3	5.4	5.2	5.4	5.1	4.4	3.8	...
31	...	4.2	5.0	5.3	5.4	5.6	5.6	5.3	5.0	5.0	4.7	4.0	...
MEAN*	3.2	4.1	4.7	4.9	5.0	5.2	5.2	5.1	5.1	4.9	4.5	3.8	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	235	220	210	210	230	200	210	215	215	230	...	...
2	...	240	230	215	210	210	220	205	200	235	220	...	...
3	...	235	220	220	210	205	200	205	205	245	220	240	...
4	250	240	225	225	205	205	250	215	215	220	...a	...	...
5	...	245	235	225	210	225	p220a	p220a	225	...a	...a	...a	...
6	...	...	230	220	240	205	210	210	265	210	220	235	...
7	...	240	230	210	195	200	215	220	...c	...c	...c	240	...
8	...	255	240	225	220	210	200	235	225	230	260	250	...
9	...	...	...	230	230	200	220	210	225	230	235	...	...
10	...	230	215	205	210	200	200	210	220	215	...	...	...
11	...	245	240	230	215	210	200	225	230	230	240	...	...
12	...	240	230	230	230	200	210	200	225	225	205	...	...
13	...	...	235	p235c	240	p235a	235	210	200	200	230	...	...
14	...	245	p235a	p230a	225	p215a	200	195	195	220	235	...	...
15	...	235	230	230	230	250	235	p230a	230	240	...a	...	...
16	...	240	230	225	220	215	205	225	200	220	...a	...	...
17	255	230	230	210	200	190	200	200	200	220	230	240	...
18	...	240	220	255	215	195	230	210	200	230	235	...	...
19	...	...c	...c	220	220	210	215	225	215	210	230	...c	...
20	...	250	230	230	p230a	225	p220a	220	220	230	225	245	...
21	...	...	225	225	200	215	220	220	235	220	235	240	...
22	...	230	230	210	210	245	p230a	220	200	230	225	...	...
23	...	230	210	200	215	215	200	210	p205a	200	230	235	...
24	...	220	205	230	...a	...a	...a	225	p220a	210	225	230	...
25	...	...	220	220	210	200	200	210	220	p225a	225	245	...
26	...	230	240	p230a	p220a	210	210	210	220	...a	...a	...	...
27	...	...	...	...a	...a	200	220	230	250	230	220	240	...
28	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
29	...	220	220	230	190	210	p220c	240	245	p235a	225	...	...
30	...	200	p210a	215	240	220	p220a	220	260	240	240	250	...
31	...	225	235	230	225	200	p210a	220	210	220	230	240	...
MEAN*	252	235	227	223	209	212	214	216	220	223	229	241	...

*=ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f°F2 EQUAL TO OR LESS THAN f°F1   h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 118

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1940 OCTOBER 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.6	0.6	0.7	0.7	0.7	0.8	1.0	1.0	0.9	0.9	0.8	0.8	0.6	1.9	2.7	3.0	3.3	3.2	3.5	3.6	3.6	3.5	3.3	3.0	2.4	1.7
2	...e	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	1.9	2.5	2.9	3.2	3.3	3.6	3.7	3.6	3.5	3.3	2.9	2.5	1.3
3	...e	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.7	0.7	1.8	2.4	2.9	3.1	3.4	3.6	3.6	3.9	3.5	3.3	2.9	2.4	1.6
4	0.6	0.7	1.0	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.6	...e	1.7	2.4	2.9	3.2	3.3	3.5	3.7	3.6	3.3	3.0	2.2	1.4	...
5	...e	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.7	...e	1.7	2.4	2.9	3.2	3.4	3.5	3.5	3.3	3.1	2.9	2.7	1.9	...
6	...e	0.7	0.7	0.9	0.8	0.8	1.0	0.9	0.9	0.8	0.7	0.6	...e	...	2.6	3.1	3.4	3.5	3.6	3.6	3.6	3.4	3.2	3.0	2.5	1.7
7	...e	0.6	0.8	0.7	0.9	0.8	0.8	0.8	...c	...c	...c	0.7	0.6	1.6	2.5	3.0	3.2	3.2	3.3	3.6	3.7	...c	...c	...c	2.5	1.7
8	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.5	2.0	2.6	2.9	3.3	3.4	3.6	3.4	3.6	3.5	3.3	3.0	2.5	1.9
9	0.5	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	2.2	2.2	3.1	3.3	3.4	3.5	3.5	3.6	3.5	3.3	3.0	2.5	1.8
10	0.7	0.7	p0.7c	0.8	1.0	1.0	1.0	0.8	0.8	0.8	0.8	0.6	...e	2.0	2.7	3.0	3.4	3.7	3.8	3.6	3.7	3.6	3.4	3.0	2.5	1.7
11	...e	0.6	1.0	0.7	0.8	0.9	0.8	0.8	0.7	0.8	0.8	0.7	0.7	2.0	2.7	3.2	3.4	3.6	3.7	3.7	3.7	3.5	3.3	2.9	2.5	1.6
12	0.6	0.7	0.8	0.8	0.8	1.0	0.8	1.2	1.1	1.0	0.9	0.7	...e	2.0	2.7	3.1	3.4	3.5	3.6	3.7	3.7	3.6	3.3	2.9	2.5	...a
13	0.6	0.6	0.8	p0.9c	1.0	1.0	1.1	1.0	1.0	0.8	0.7	0.7	0.6	1.8	2.7	3.1	p3.5c	3.7	3.7	3.8	3.7	3.7	3.5	3.1	2.5	1.7
14	0.6	0.6	1.0	0.7	0.8	1.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	1.9	2.7	3.0	3.4	3.6	3.7	3.7	3.7	3.5	3.2	3.0	2.5	1.6
15	0.6	0.7	0.7	0.8	1.0	1.0	1.0	1.0	0.9	0.8	0.6	0.6	0.6	1.9	2.7	3.1	3.5	3.6	3.9	3.8	3.7	3.6	3.3	2.9	2.3	1.2
16	...e	0.6	0.7	0.8	0.8	0.8	0.8	0.8	1.0	0.9	0.7	0.6	...e	2.0	2.6	3.1	3.4	3.6	3.7	3.6	3.6	3.7	3.5	3.1	2.5	1.8
17	...e	0.6	0.7	0.7	0.8	0.8	0.8	1.0	1.0	0.8	0.8	0.7	0.6	2.0	2.6	3.1	3.3	3.6	3.7	3.7	3.6	3.6	3.3	2.8	2.5	1.8
18	...e	0.7	0.8	0.8	0.8	0.8	0.7	0.9	0.8	0.8	0.7	0.6	0.6	2.0	2.7	3.1	3.3	3.5	3.6	3.7	3.7	3.5	3.4	3.0	2.6	1.9
19	...c	...c	...c	0.8	0.9	0.8	0.8	0.8	0.9	0.7	0.7	0.7	0.8	...c	...c	...c	3.4	3.6	3.7	3.7	3.6	3.5	3.2	3.2	p2.6c	1.9
20	0.5	0.7	0.7	0.8	0.8	0.9	0.8	0.7	1.0	0.8	0.7	0.6	0.5	1.8	2.7	3.1	3.4	3.6	3.7	3.7	3.6	3.6	3.4	2.9	2.3	1.6
21	0.5	0.6	1.0	1.0	1.0	1.0	0.8	1.0	0.8	0.8	0.8	0.6	0.7	2.0	2.7	3.1	3.4	3.6	3.8	3.8	3.7	3.6	3.4	3.1	2.5	1.7
22	0.6	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.9	0.7	0.9	0.8	0.8	2.0	2.5	3.0	3.3	3.5	3.7	3.6	3.6	3.5	3.3	3.0	2.6	2.0
23	0.5	0.6	0.6	0.7	0.8	0.7	0.8	0.9	0.8	0.7	0.7	0.6	0.6	2.0	2.7	3.1	3.3	3.5	3.6	3.6	3.3	p3.3	3.3	3.0	2.8	1.8
24	0.6	0.7	0.7	0.8	0.9	0.8	0.9	1.0	1.0	0.8	0.7	0.6	0.6	2.0	2.6	3.1	3.3	3.5	3.6	3.6	3.5	3.0	3.3	3.0	2.6	1.8
25	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.9	0.6	0.8	0.8	0.7	0.6	2.0	2.6	3.1	3.3	3.5	3.5	3.5	3.7	p3.5a	p3.2a	2.9	2.5	...a
26	0.5	0.6	0.7	0.8	0.8	0.8	1.0	1.0	1.0	0.9	0.7	0.6	0.6	2.1	2.8	3.0	3.3	3.5	3.6	3.6	3.5	3.4	3.1	2.7	2.2	1.4
27	...e	0.7	0.7	0.9	1.0	1.0	0.8	1.0	1.0	0.9	0.7	0.7	...e	2.0	2.6	3.0	3.3	3.4	3.4	3.4	3.1	3.3	3.4	3.2	2.6	1.8
28	...e	0.7	1.0	p0.9	1.0	1.0	1.0	1.0	0.8	0.9	0.8	0.7	...e	2.1	2.7	3.1	p3.3	3.5	3.5	3.6	3.6	3.4	3.3	3.0	2.7	1.0
29	...e	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.7	2.0	2.7	3.1	3.3	3.5	3.6	3.6	3.6	3.6	3.3	3.0	2.4	1.1
30	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	...a	2.6	3.0	3.3	3.5	3.6	3.6	3.7	3.5	3.4	3.1	2.6	1.5
31	0.6	0.7	0.7	0.7	0.8	0.8	0.8	1.0	0.9	0.8	0.7	0.6	0.6	2.1	2.7	3.1	3.4	3.5	3.5	3.1	3.6	3.5	3.3	3.0	2.5	1.8
MEAN*	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	1.9	2.6	3.0	3.3	3.5	3.6	3.6	3.6	3.5	3.3	3.0	2.4	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 119

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1940 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND NOVEMBER 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.8	6.4	5.5	5.3	4.7	4.5	5.2	5.8	6.4	7.3	8.0	8.4	9.9	10.3	10.9	10.9	11.4	10.5	11.0	9.8	8.8	7.2	6.8	6.7	7.8
2	6.8	5.8	5.5	5.0	4.3	4.2	5.4	6.2	7.3	8.1	8.9	9.5	10.4	10.5	11.0	11.1	11.0	11.0	10.8	9.9	8.3	7.0	6.6	6.8	8.0
3	6.6	6.5	6.0	5.5	4.7	4.4	5.5	6.6	p7.2	8.9	10.1	10.8	10.8	11.4	11.3	11.1	10.5	10.0	9.7	9.5	8.4	8.2	8.1	8.0	8.3
4	7.6	6.8	5.7	5.1	4.7	4.7	5.7	6.9	7.8	8.3	9.4	9.5	9.8	10.8	10.2	10.4	10.1	9.8	10.0	8.8	6.8	5.9	5.3	5.5	7.7
5	5.5	5.2	5.7	5.2	4.5	4.0	p5.0	6.9	8.2	10.4	11.1	11.1	11.1	10.5	10.2	9.8	9.5	9.8	10.0	9.4	7.7	6.7	6.2	6.2	7.9
6	6.3	6.0	5.6	4.7	4.5	4.7	5.5	5.7	5.8	6.3	6.9	7.3	7.3	7.7	7.6	7.7	7.4	7.4	7.2	7.4	6.5	6.3	5.9	5.8	6.4
7	5.9	5.1	4.7	4.0	3.9	4.0	5.3	5.6	6.2	7.0	7.5	8.4	8.8	9.5	...c	...c	...c	9.0	9.0	8.3	7.2	6.6	6.1	6.0	...
8	6.0	6.1	5.2	4.6	4.5	4.1	4.7	5.5	5.9	6.3	6.9	7.6	8.2	9.2	10.0	10.0	10.0	10.3	10.0	9.1	7.8	7.0	5.7	5.3	7.1
9	6.6	7.8	6.1	5.7	5.4	5.4	5.8	6.2	6.9	7.6	8.9	10.1	10.6	11.3	11.9	11.9	11.4	11.0	10.6	10.7	8.3	7.9	7.5	7.6	8.5
10	7.6	7.4	7.4	7.3	6.3	5.4	5.8	6.6	7.2	7.5	8.8	9.7	10.6	10.7	10.8	10.3	10.2	9.8	10.0	9.4	8.1	7.4	6.9	6.6	8.2
11	6.8	6.4	5.5	5.1	4.7	5.0	6.8	7.9	8.2	8.9	9.3	10.2	10.3	10.6	10.7	10.7	10.9	10.4	10.0	9.3	8.1	7.4	7.3	7.2	8.2
12	7.1	7.1	6.1	5.5	5.1	5.4	7.2	8.2	8.4	8.2	8.8	9.7	10.8	11.0	11.0	11.0	10.1	9.7	8.9	9.4	9.0	9.2	9.7	8.1	8.5
13	7.9	6.4	5.9	5.7	5.3	5.0	5.1	5.1	p5.4a	5.6	6.6	7.1	6.6	6.3	6.2	5.6	5.2	5.0	4.4	p4.6a	4.7	4.5	p4.4a	4.2	5.5
14	...c	...a	3.8	...a	...a	...a	4.3	5.1	5.7	p6.7c	7.7	8.6	9.5	9.2	8.9	8.0	8.3	8.0	7.3	8.0	7.2	7.0	6.4	6.1	...
15	5.9	5.4	5.1	4.8	4.4	4.2	4.9	5.1	5.5	6.6	7.3	7.7	8.8	9.1	9.3	9.0	8.1	8.8	7.7	7.3	6.8	6.5	6.5	p6.7	6.7
16	6.4	5.7	5.5	5.3	5.0	5.0	5.9	7.1	7.5	8.1	9.0	10.0	9.4	9.5	9.2	9.3	8.9	8.4	8.3	8.1	6.8	6.6	6.2	6.0	7.4
17	5.9	5.9	p5.6a	p5.3a	4.9	5.5	5.5	4.7	5.4	5.8	6.6	7.5	7.6	7.6	7.5	7.2	7.2	7.3	7.5	7.7	7.1	6.6	6.4	6.4	6.4
18	6.1	5.6	5.7	5.4	5.5	5.6	5.5	p5.5c	5.5	5.8	6.6	7.2	7.4	7.7	7.4	7.2	7.0	7.4	7.1	7.3	6.7	6.4	6.1	...a	...
19	...a	...a	...a	5.6	4.6	4.5	6.0	6.4	7.7	8.4	9.0	9.8	9.9	9.7	9.2	9.0	9.0	8.9	9.2	9.4	9.2	8.2	7.5	7.3	...
20	7.0	6.2	5.4	5.0	4.7	4.8	4.9	5.5	5.7	5.9	6.1	7.0	7.3	7.7	8.2	8.2	8.3	8.4	8.3	7.9	7.1	6.9	6.5	6.5	6.6
21	6.6	6.4	5.1	4.3	4.0	4.3	5.4	6.6	8.2	9.0	9.4	9.7	10.4	10.6	10.6	10.3	10.1	10.0	10.6	10.2	9.6	8.6	7.2	7.1	8.1
22	6.8	5.6	5.4	5.4	5.3	5.3	6.0	6.1	6.5	p7.0	7.9	9.7	9.6	9.9	10.2	9.8	9.7	10.0	8.7	8.5	7.7	7.1	5.8	5.6	7.5
23	5.2	5.8	p4.5a	3.8	3.0	3.4	4.2	5.3	6.2	6.6	7.3	7.4	p8.0a	9.4	8.6	8.2	8.6	8.4	8.1	8.5	7.1	p6.8a	6.5	...a	...
24	...a	...a	...f	...f	...f	...a	...a	5.0	...a	...a	...a	...a	7.2	...a	8.8	9.3	8.6	8.1	8.4	8.0	7.1	6.4	p6.0f	5.8	...
25	6.1	5.8	5.2	...f	...f	...f	5.6	6.0	8.1	9.1	8.4	8.9	8.8	9.4	9.9	9.1	9.2	8.6	8.0	8.7	8.0	7.1	6.5	6.1	...
26	5.6	5.9	4.8	4.3	3.5	3.2	5.0	5.7	7.1	8.1	9.3	9.1	9.0	8.6	8.4	8.9	9.3	9.8	9.9	9.3	7.9	6.5	5.5	5.5	7.1
27	5.6	5.1	5.0	4.5	4.3	5.2	6.4	p7.6	8.4	9.6	9.3	9.2	9.8	10.2	9.7	9.0	8.6	8.6	8.4	8.2	8.2	7.8	7.2	6.7	7.6
28	p6.6	6.2	5.9	5.5	5.1	4.8	5.5	...c	...c	8.8	8.0	9.0	p9.5a	9.5	9.9	10.2	10.2	9.7	9.3	8.9	8.3	7.1	6.5	6.5	...
29	6.5	5.9	5.5	4.1	3.6	4.3	5.3	6.8	p7.5c	p9.0c	10.0	10.6	11.0	10.8	10.6	11.6	11.3	10.8	10.3	8.8	7.2	6.9	6.2	p6.6	8.0
30	6.0	6.1	4.2	3.3	3.2	3.4	4.4	4.8	5.6	6.5	8.1	9.0	8.4	8.7	8.7	9.0	9.2	9.2	8.7	8.6	7.5	7.2	7.0	7.0	6.8
31																									
* MEAN	6.4	6.1	5.4	5.0	4.6	4.6	5.4	6.1	6.8	7.6	8.3	9.0	9.2	9.6	9.6	9.4	9.3	9.1	8.9	8.6	7.6	7.0	6.6	6.4	7.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 120

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1940 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — NOVEMBER 1940

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	275	250	270	265	255	265	240	315	325	330	340	340	335	305	310	305	290	280	240	255	235	265	285	295	286
2	265	260	270	265	265	285	260	290	280	285	295	p300a	320	310	300	290	290	270	245	220	215	235	275	275	274
3	295	280	255	255	255	265	240	275	p320	310	305	310	300	300	295	290	280	240	250	235	250	270	270	260	275
4	250	220	235	250	255	290	250	230	300	300	300	330	320	320	310	300	275	230	250	220	220	240	300	325	272
5	315	310	290	260	225	250	235	240	265	320	280	290	330	335	305	310	300	280	245	260	235	p280	310	290	282
6	295	280	260	270	320	300	265	p300c	460	430	400	370	390	375	365	340	335	295	260	235	255	290	285	280	319
7	260	260	255	245	285	300	270	320	255	250	380	245	360	340	...c	...c	...c	275	260	230	235	260	290	310	...
8	310	250	250	275	270	300	250	250	365	390	380	365	380	345	320	320	290	270	250	225	235	230	245	p260a	293
9	300	235	240	265	265	270	255	290	315	345	330	320	310	330	310	300	285	270	250	220	225	265	275	275	281
10	305	275	315	250	230	235	240	325	350	270	320	330	300	310	330	295	290	260	255	235	230	260	280	295	283
11	280	255	250	260	260	255	250	270	255	315	300	320	320	310	320	310	290	260	245	225	225	245	265	280	274
12	275	p260a	240	235	255	260	255	260	265	305	325	345	375	310	310	300	280	270	260	260	250	275	240	250	275
13	215	260	270	285	320	325	375	490	p500a	520	405	450	420	480	500	460	460	270	...a	...a	...a	p310	...a	320	...
14	...c	...a	355	...a	...c	...c	515	490	430	...c	350	335	315	310	290	340	280	305	250	250	235	250	265	265	...
15	270	295	275	280	280	300	375	495	480	400	355	390	350	340	330	305	335	250	255	250	255	310	300	265	322
16	270	255	260	280	265	270	250	315	345	360	340	315	320	315	320	300	300	290	280	245	235	255	255	280	288
17	300	275	...a	...a	330	320	325	550	455	440	425	395	370	360	400	365	350	300	280	255	265	280	270	265	...
18	290	300	280	280	270	310	265	315	...	495	p420	370	380	340	375	360	355	300	255	250	260	315	...a	...a	...
19	...a	...a	...a	240	235	280	225	240	320	315	325	320	310	305	315	320	300	290	285	250	255	250	270	250	...
20	235	240	225	255	260	255	355	385	400	395	455	380	370	380	330	340	300	290	270	255	250	270	280	280	311
21	270	240	215	265	255	265	255	250	290	305	320	325	330	310	310	315	300	300	270	270	240	230	235	255	276
22	275	250	265	270	270	270	245	315	350	p355a	p360a	340	370	p315a	310	325	330	275	250	250	275	260	300	300	295
23	290	240	p260a	280	p290a	305	430	405	330	320	365	365	p360a	345	340	370	325	255	275	230	250	...a	...a	...a	...
24	...a	...a	...f	...f	...f	...a	...a	...a	...a	...a	...a	...a	...a	...a	330	310	280	270	275	240	270	265	...f	330	...
25	280	270	220	...f	...f	...f	275	...a	305	280	320	320	350	325	305	300	290	275	260	260	255	260	285	320	...
26	315	270	250	265	230	315	275	235	340	325	345	315	310	375	330	335	330	285	260	220	225	215	290	280	289
27	260	260	260	p275a	290	255	230	285	325	300	300	330	p320a	310	315	p310c	285	275	255	250	235	250	275	275	280
28	290	255	325	275	265	250	235	...c	...c	...a	340	330	p330a	325	330	310	290	270	260	230	230	225	260	285	...
29	265	250	225	225	275	240	240	225	...c	...c	300	340	330	335	380	300	295	280	265	235	250	260	300	285	...
30	280	275	240	285	300	295	270	...	...	410	350	295	390	320	335	315	300	280	270	230	240	260	255	260	...
31																									
MEAN*	279	262	261	264	269	279	281	322	349	353	346	341	340	334	332	322	307	275	259	241	243	261	275	282	295

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 121

NOVEMBER 1940 — NOVEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.4	4.7	5.0	p5.2a	5.5	5.2	4.9	5.4	5.2	4.7	4.3	...
2	...	4.2	4.7	...a	...a	...a	...a	5.5	5.5	5.4	4.9	4.0	...
3	...	4.2	p5.3	5.3	5.3	5.4	5.2	5.4	5.2	4.9	4.7	...	...
4	...	...	4.8	5.0	5.2	5.5	5.1	5.2	5.3	5.5	4.3	...	...
5	...	...	4.9	5.6	4.7	5.4	5.6	5.3	5.3	5.3	p5.0	4.3	...
6	...	...	4.7	4.8	5.0	5.0	5.0	5.0	4.9	4.8	4.8	4.3	...
7	3.3	4.2	4.8	5.0	5.3	5.1	5.4	5.0	...c	...c	...c	4.2	3.3
8	...	...	4.4	4.9	4.9	5.1	5.4	5.2	5.3	5.0	4.8	4.5	...
9	...	4.3	5.3	5.4	5.5	5.6	5.4	5.3	5.3	5.3	...a	...a	...
10	...	4.9	5.2	5.1	5.1	5.7	...a	...a	...a	...a	...a	...	...
11	...	...	4.8	5.6	5.1	5.3	5.4	5.4	5.5	5.3	4.8	4.2	...
12	3.8	4.5	4.8	5.2	5.3	5.6	5.3	5.1	5.4	4.9	4.8	4.3	...
13	3.6	4.1	p4.2a	4.4	p4.6a	4.8	p4.8a	4.7	4.7	4.4	4.3	...	...
14	3.5	...a	...a	...c	5.3	5.3	5.3	5.4	p5.5a	5.5	4.4	3.9	...
15	3.7	4.2	4.5	4.8	5.0	5.5	5.2	5.4	5.3	4.8	4.9	...	...
16	...	4.7	4.9	5.4	5.2	5.3	5.1	5.4	5.2	4.8	4.9	4.1	...
17	3.3	4.0	4.4	4.7	4.9	5.0	5.0	5.2	5.1	4.9	4.6	...	...
18	...	4.2	4.4	4.9	p4.8	4.8	5.0	4.9	5.1	4.9	4.6	4.0	...
19	...	...	4.8	5.0	4.8	5.1	5.2	5.1	5.0	4.8	...a	...	...
20	3.6	4.1	4.5	4.4	4.9	4.9	5.0	5.2	4.9	5.0	4.6	3.7	...
21	...	...	4.6	p4.8	4.9	5.3	5.2	5.2	5.2	4.8	4.4	4.0	3.1
22	...	4.1	...a	...a	...a	...a	...a	...a	4.8	4.8	4.6	3.7	...
23	3.8	4.1	4.3	5.0	4.9	p5.0a	p5.0a	5.1	p5.0a	4.8	4.2	3.8	...
24	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...	...
25	...	...a	...a	4.9	5.1	p5.1a	5.1	4.9	4.9	4.7	4.3	4.2	...
26	...	...	4.6	4.8	5.0	5.3	5.2	6.0	5.1	5.0	4.8	4.0	...
27	...	p4.3	4.8	4.0	p4.8a	5.0	p5.2a	p5.2a	4.9	4.8	4.2	...	...
28	...	4.8	...c	...a	...a	...a	...a	5.0	5.0	4.8	4.5	3.7	...
29	...	...	...	...c	...a	5.4	5.2	5.2	5.1	4.8	4.6	3.8	...
30	...	4.1	4.6	4.8	...a	...a	...a	...a	5.0	4.8	4.6	4.0	...
31													
* MEAN	3.6	4.3	4.7	5.0	5.0	5.2	5.2	5.2	5.1	5.0	4.6	4.0	3.2

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	6	9	10	11	12	13	14	15	16	17	16
1	...	230	230	210	...a	...a	...a	240	...a	...a	250	250	...
2	...	235	240	...a	...a	...a	...a	200	200	220	225	240	...
3	...	235	p225	225	220	220	220	220	230	235	220	...	...
4	...	...	220	220	225	...a	...a	...a	...a	245	235	...	...
5	...	...	215	220	210	260	245	...a	...a	...a	...a	235	...
6	...	...	225	...a	...a	...a	220	225	225	...a	...a	...a	...
7	245	235	p245a	260	230	...a	...a	225	...c	...c	...c	225	250
8	...	...	210	215	210	190	225	230	225	260	240	245	...
9	...	230	220	235	p220a	200	220	210	245	220	...	...	...
10	...	...a	...a	190	170	...a	...a	...a	...a	...a	...a	...	...
11	...	...	210	220	220	215	200	205	220	220	245	225	...
12	240	230	220	210	220	210	205	215	215	225	235	240	...
13	265	245	...a	...a	...a	...a	...a	...a	...a	...a	...a	...	...
14	...a	...a	...a	...c	235	205	225	235	...a	225	245	240	...
15	280	235	230	215	210	215	200	200	230	235	240	...	...
16	...	245	230	230	220	p220a	220	215	215	230	250	240	...
17	290	290	225	210	210	195	200	195	250	240	235	...	...
18	...	235	220	...a	...a	...a	...a	...a	230	...a	235	...	...
19	...	...	230	230	220	215	220	215	215	245	...a	...	...
20	250	260	250	245	p220a	200	200	270	225	235	245	230	...
21	...	...	250	p230a	210	p215a	225	210	225	240	245	245	250
22	...	240	...a	...a	...a	...a	...a	...a	...a	265	240	235	...
23	245	220	220	...a	...a	...a	...a	...a	...a	245	240	225	...
24	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...	...
25	...	...a	...a	260	...a	...a	...a	230	...a	215	235	240	...
26	...	...	235	235	220	230	245	250	240	240	275	235	...
27	...	p230	245	...a	...a	...a	...a	...a	225	220	235	...	...
28	...	245	...c	...a	...a	...a	...a	...a	225	240	p235a	230	...
29	...	...	...	...c	...a	...a	...a	...a	240	240	235	230	...
30	...	230	...a	...a	...a	...a	...a	...a	220	p230a	235	245	...
31													
* MEAN	259	239	228	226	216	214	218	222	226	235	240	236	250

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f°F2 EQUAL TO OR LESS THAN f°F1   h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 122

NOVEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	0.8	0.7	0.9	0.8	0.9	0.9	0.8	0.9	0.7	0.7	0.6
2	0.7	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6
3	0.7	0.7	0.7	0.9	0.9	0.9	1.0	1.0	1.0	0.8	0.8	0.8	0.7
4	0.7	0.7	1.0	0.9	1.0	1.0	1.0	1.0	0.8	0.8	0.7	0.7	0.6
5	...e	0.5	0.7	0.7	0.8	0.9	0.8	0.9	1.0	1.0	0.9	0.8	0.6
6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.7
7	0.6	0.7	0.7	0.8	0.9	0.8	1.0	0.9	...c	...c	...c	0.7	0.7
8	0.7	0.6	0.7	0.9	1.2	1.0	0.9	0.9	0.8	0.8	0.8	0.7	0.8
9	0.6	0.7	0.8	0.8	1.0	0.8	0.9	0.8	0.9	0.8	0.7	0.7	0.6
10	0.6	0.7	0.9	0.9	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.7	0.7
11	0.6	0.7	0.9	1.1	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.7	0.6
12	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	0.9	0.8	0.7	0.6	0.6
13	0.6	0.7	0.7	0.7	0.9	0.8	0.8	0.8	0.9	0.7	0.7	0.7	0.6
14	0.7	0.8	0.7	p0.8c	0.8	0.8	0.9	1.0	1.0	0.9	0.8	0.7	0.6
15	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.1	1.9	1.2	0.7
16	0.7	0.7	0.8	0.9	1.0	1.0	1.0	0.8	1.0	0.9	0.8	0.8	0.6
17	...e	1.1	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.9	0.8	0.7	...e
18	0.6	0.7	1.0	0.9	1.0	1.0	0.9	1.0	0.9	0.9	0.8	0.8	...e
19	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.8	0.8	...e
20	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	...e
21	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.7	0.7	0.6
22	0.6	0.7	1.0	0.8	0.9	0.9	1.0	0.9	0.9	0.8	0.7	0.9	0.6
23	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.6	0.6
24	...e	0.7	0.7	0.8	0.8	0.8	1.0	1.0	0.9	0.8	0.8	0.7	0.7
25	...e	0.7	p0.7	0.8	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.6
26	0.7	0.7	0.7	0.8	0.9	0.8	0.9	0.9	0.8	0.8	0.9	0.7	0.7
27	0.7	0.7	0.8	0.9	0.9	0.8	1.0	0.9	0.8	0.9	0.8	0.9	0.9
28	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.7	0.6
29	...e	0.7	0.7	p0.8c	1.0	0.9	1.0	1.0	0.9	0.8	0.7	0.9	0.7
30	...e	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.6
31													
* MEAN	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.2	2.7	3.1	3.4	3.5	3.6	3.6	3.6	3.5	3.4	3.0	2.4	1.9
2	2.4	2.8	3.2	3.5	3.6	3.7	3.7	3.7	3.6	3.4	3.1	2.7	2.1
3	2.3	2.8	3.1	3.4	3.6	3.7	3.7	3.6	3.6	3.3	3.1	2.6	1.9
4	2.1	2.7	3.2	3.5	3.5	3.6	3.6	3.6	3.5	3.3	3.0	2.7	1.9
5	2.2	2.7	3.2	3.4	3.4	3.7	3.7	3.8	3.6	3.5	3.2	2.7	1.6
6	2.2	2.7	3.1	3.4	3.5	3.6	3.7	3.6	3.6	3.4	3.1	2.7	1.7
7	2.0	2.7	3.1	3.4	3.6	3.7	3.6	3.7	...c	...c	...c	2.4	2.0
8	2.0	2.6	3.1	3.6	3.9	3.8	3.8	3.7	3.6	3.5	3.1	2.8	2.0
9	2.4	2.8	3.2	3.5	3.6	3.7	3.4	3.5	2.4	2.0	p2.2	2.4	2.0
10	2.2	3.0	3.2	3.6	3.7	3.8	3.8	3.8	3.8	3.6	3.2	2.8	1.7
11	2.2	2.8	3.2	3.4	3.5	3.8	3.7	3.7	3.6	3.5	3.3	2.8	2.1
12	2.4	2.9	3.2	3.4	3.5	3.7	3.5	3.3	3.1	3.1	3.3	2.7	2.0
13	2.2	2.8	3.1	3.4	3.6	3.6	3.7	3.6	3.5	3.3	3.0	2.7	2.0
14	2.1	2.7	3.2	p3.3c	3.4	3.3	3.0	3.7	3.6	3.5	3.3	2.6	1.9
15	2.3	2.8	3.2	3.6	3.7	3.8	3.9	3.5	3.4	3.5	3.3	3.0	1.9
16	2.4	3.0	3.4	3.6	3.8	3.8	3.8	3.7	3.3	3.6	p3.2	2.8	1.9
17	2.0	2.7	3.2	3.4	3.6	3.7	3.7	3.4	3.6	3.4	3.2	2.6	...
18	2.4	2.8	3.2	3.5	3.6	3.7	3.7	3.5	3.1	...a	...a	2.0	...
19	1.6	2.8	3.2	3.4	3.6	4.0	3.6	3.6	3.6	3.4	3.1	2.6	...
20	2.2	2.8	3.2	3.4	3.6	3.7	3.7	3.6	3.6	3.6	3.2	2.6	...
21	...	2.8	3.1	3.3	3.4	3.6	3.6	3.5	3.5	3.3	3.1	2.7	2.0
22	2.2	2.7	3.1	3.3	3.4	3.6	3.7	3.6	3.3	3.2	3.0	2.4	2.0
23	2.2	2.7	3.1	3.3	3.6	3.6	3.6	3.6	3.5	3.1	2.9	2.0	...
24	...	2.2	3.1	3.4	3.5	3.4	3.6	3.6	3.5	3.1	3.0	2.5	1.8
25	...	2.2	p2.7	2.9	3.0	3.1	3.3	3.1	3.6	3.3	3.2	2.6	2.2
26	2.3	2.7	3.1	3.2	3.4	3.6	3.7	3.5	3.5	3.3	3.0	2.7	1.9
27	2.2	2.8	3.0	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.1	2.7	2.0
28	...	2.8	3.1	3.4	3.5	3.7	3.6	3.6	3.5	3.4	3.2	2.6	2.1
29	...	2.7	3.1	p3.4c	3.6	3.7	3.8	3.8	3.6	3.5	3.1	2.8	1.8
30	2.3	2.7	3.2	3.5	3.5	3.7	3.6	3.3	3.1	2.6	2.7	2.8	2.0
31													
* MEAN	2.2	2.7	3.1	3.4	3.5	3.6	3.6	3.6	3.4	3.3	3.1	2.6	1.9

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = $f^{0}F2$ EQUAL TO OR LESS THAN $f^{0}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

DECEMBER 1940 — TABLE 123 — DECEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.2	5.7	5.0	p4.7f	p4.3f	4.0	4.6	5.5	6.1	6.4	6.5	6.5	6.8	7.0	7.2	7.7	7.3	7.4	7.4	7.1	7.1	6.5	6.5	6.8	6.3
2	6.5	5.6	4.7	3.9	p3.7f	3.5	4.5	5.5	p6.0c	6.4	7.3	8.1	8.8	9.3	...c	...c	8.5	8.7	9.1	...c	...c	7.1	6.7	6.8	...
3	7.0	p6.1	5.6	5.3	p5.0	4.7	4.2	5.1	5.5	5.7	6.8	6.7	7.5	8.1	8.0	8.3	8.0	8.0	8.0	7.7	7.6	7.5	7.4	7.0	6.7
4	6.7	6.2	5.5	4.8	4.4	4.5	5.5	7.0	7.0	7.7	8.9	8.8	9.5	10.1	11.1	10.8	10.5	10.5	10.3	9.7	8.5	7.2	6.8	6.7	7.9
5	6.4	p6.0f	5.4	...f	...f	...f	4.7	5.2	6.0	5.7	...a	...c	...c	8.4	8.4	8.4	8.4	8.2	7.6	7.7	7.9	7.3	6.6	6.6	...
6	6.7	6.4	5.6	5.0	4.4	4.7	5.2	5.7	5.7	6.2	7.1	7.6	7.1	7.6	7.9	8.6	9.1	9.0	7.9	7.5	7.2	6.4	p6.2c	6.0	6.7
7	5.9	5.5	5.0	4.4	4.4	4.8	6.1	6.8	p7.4c	7.7	8.0	8.6	9.2	9.0	9.1	8.8	8.7	9.1	9.0	8.7	8.2	7.4	7.2	6.9	7.3
8	7.0	6.5	5.5	5.2	4.5	5.0	6.7	7.0	7.7	p8.0a	8.2	8.7	p9.0a	p9.5a	10.2	10.1	10.4	10.0	10.0	9.5	8.5	7.6	7.2	7.3	7.9
9	6.8	6.5	6.3	6.0	5.0	5.4	6.2	6.7	7.8	8.7	9.5	9.5	9.8	10.0	10.2	10.8	11.5	11.5	10.9	9.8	9.4	8.1	p7.8	8.0	8.4
10	8.9	7.9	6.6	5.5	5.1	5.4	6.8	7.0	6.8	8.3	7.9	7.8	7.7	8.1	8.1	p8.0a	7.6	8.0	8.5	8.0	7.2	6.8	6.3	6.1	7.3
11	6.2	5.5	4.9	5.3	5.1	5.0	5.1	5.1	5.5	5.6	6.0	5.7	6.1	6.0	6.8	6.9	7.0	6.8	7.4	6.6	6.5	6.2	6.1	6.0	6.0
12	5.7	5.5	4.2	4.2	3.7	4.0	4.8	5.0	5.3	6.6	7.0	7.5	6.8	7.0	7.5	7.4	7.2	7.7	8.1	8.1	7.7	7.2	6.2	6.4	6.3
13	6.0	5.8	5.8	6.1	5.7	5.0	5.1	5.5	6.0	6.8	6.7	6.2	7.2	7.1	6.9	6.4	6.7	6.9	7.2	7.9	7.4	6.6	6.4	6.4	6.4
14	5.9	5.5	5.2	5.0	4.8	4.9	5.5	p5.6a	5.8	6.0	6.5	6.8	6.8	7.2	7.3	7.3	7.6	7.9	7.9	8.0	7.0	6.5	6.6	7.4	6.5
15	6.7	5.2	4.6	4.1	3.8	4.1	4.8	6.2	5.3	5.6	6.8	7.0	6.8	6.9	7.1	7.0	7.0	7.6	7.6	7.3	p7.2a	7.0	6.5	...f	...
16	...f	...f	...f	4.7	4.5	4.6	5.7	6.8	7.0	7.8	7.6	8.4	8.8	9.3	8.5	7.9	8.2	8.3	8.2	8.1	p7.5f	6.6	5.9	p5.8f	...
17	...f	...f	...f	...f	...f	4.5	5.3	5.9	6.0	6.0	7.1	7.2	7.2	7.2	7.3	7.2	7.1	7.3	7.1	7.6	7.2	6.4	5.5	5.6	...
18	5.7	6.6	5.7	p5.0f	4.0	4.6	4.5	5.4	6.0	p7.0a	8.4	8.9	8.9	8.3	7.7	7.7	7.4	7.2	7.3	7.6	7.8	7.1	6.5	6.2	6.7
19	5.4	5.4	5.2	5.2	5.4	6.0	7.0	7.3	7.3	7.2	8.4	9.5	10.3	10.8	10.2	10.0	9.7	9.5	9.0	8.4	8.0	6.6	5.9	p5.9f	7.6
20	p5.9f	5.8	p5.4f	5.0	p5.0f	p5.0f	5.0	5.9	7.2	p8.0a	8.4	9.8	10.1	10.2	9.9	9.9	10.9	10.8	9.8	9.3	9.2	6.5	6.8	7.0	7.8
21	7.2	5.3	4.2	4.1	4.5	4.0	4.1	4.4	5.0	5.9	5.8	6.5	5.8	6.3	6.7	6.6	6.0	5.9	6.0	5.6	5.9	5.6	5.5	5.6	5.5
22	4.9	4.3	p3.5f	3.0	2.7	3.0	4.1	4.9	5.4	6.0	6.9	6.8	7.5	7.9	7.6	7.1	6.7	6.6	6.7	7.2	7.0	6.9	6.8	6.8	5.8
23	6.8	6.1	6.1	5.1	4.2	3.8	4.3	5.1	5.8	6.4	7.4	6.6	7.0	6.6	6.5	6.2	6.3	6.7	7.5	7.2	6.5	5.9	5.6	5.2	6.0
24	5.5	5.0	5.0	4.9	4.5	4.6	5.0	5.6	6.8	6.1	6.3	6.1	6.5	6.4	6.3	6.5	6.6	6.1	6.3	6.2	5.8	5.5	5.5	5.2	5.8
25	p5.3f	5.5	...f	...a	...a	3.6	4.8	5.3	6.0	7.0	7.0	7.1	6.5	6.7	6.7	6.8	7.7	7.9	8.4	7.8	6.1	5.6	5.6	5.5	...
26	5.8	4.7	4.4	4.4	4.8	4.8	5.4	6.1	6.5	8.1	8.4	8.5	7.5	6.8	6.4	6.5	p6.7a	7.3	7.8	8.6	6.3	5.8	5.7	5.7	6.4
27	5.6	5.1	4.3	4.1	p3.6f	3.5	4.3	5.3	p5.2	6.1	6.2	6.3	7.7	8.7	8.6	8.9	8.8	7.6	8.0	8.1	p6.6	6.1	5.9	5.7	6.3
28	6.0	p5.1f	4.2	...f	...f	...a	...f	...f	7.0	8.1	8.2	9.0	9.1	9.2	8.9	9.1	9.2	9.3	10.2	9.7	8.3	6.3	5.7	5.6	...
29	5.5	5.8	5.3	4.8	p4.9a	4.9	5.4	5.2	6.9	7.8	9.8	9.9	9.7	9.0	9.5	9.8	8.9	8.6	7.9	7.1	7.0	6.2	5.8	5.7	7.1
30	6.0	5.4	4.8	4.9	4.7	4.1	4.7	5.0	6.1	6.0	p6.5	6.2	3.7	p6.1	5.6	6.0	6.6	6.8	7.0	5.9	6.5	6.2	6.1	6.3	5.7
31	5.7	5.3	4.4	3.8	3.6	3.5	4.3	4.7	4.8	5.1	5.5	5.8	6.4	6.6	6.0	6.1	6.0	6.1	6.2	6.6	6.9	7.1	6.3	6.2	5.5
MEAN*	6.2	5.7	5.1	4.8	4.5	4.5	5.1	5.7	6.2	6.8	7.4	7.6	7.7	8.0	7.9	8.0	8.0	8.0	8.1	7.8	7.3	6.6	6.3	6.3	6.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 124

DECEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1940

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	255	250	255	260	245	265	245	220	340	370	355	415	400	385	375	340	350	300	260	280	285	285	300	275	305
2	260	250	275	265	270	280	290	340	...c	380	380	360	355	325	...c	...c	315	325	260	230	235	285	245	275	...
3	250	p270	300	330	p300	...a	...a	...a	420	p485	360	385	360	330	350	325	300	290	270	260	245	250	250	250	...
4	260	245	235	255	250	245	245	280	295	325	310	300	345	335	320	300	300	275	250	235	230	250	330	310	280
5	315	...f	...f	...f	...f	...f	270	245	360	400	...a	...c	...c	360	355	330	300	280	260	265	265	250	265	300	...
6	260	240	270	270	265	280	275	340	420	400	...a	355	400	350	365	340	300	275	290	p280a	p275	270	270	300	...
7	280	265	235	260	245	255	245	255	...a	335	340	350	350	320	320	345	330	295	260	245	230	270	265	310	...
8	280	265	285	290	235	265	245	270	295	...a	325	340	...a	...a	350	300	325	285	275	240	245	270	285	265	...
9	270	250	255	215	230	235	235	240	310	300	315	320	325	360	360	350	345	280	280	245	240	260	285	285	283
10	275	215	220	265	275	285	250	265	390	345	345	400	370	400	370	p370a	375	325	300	260	285	280	275	310	310
11	285	295	315	300	300	360	370	485	p485	p500	430	p590	520	550	420	400	365	360	305	265	265	285	280	285	376
12	275	230	245	245	295	290	290	230	p675	p420	380	360	500	450	380	370	360	340	295	280	250	260	270	270	332
13	295	290	275	275	270	300	415	470	480	345	430	550	390	400	400	410	370	345	300	290	235	250	260	300	348
14	300	255	260	310	290	275	290	...a	p470	...a	420	400	440	400	p375a	390	335	330	300	260	225	300	325	p250a	...
15	240	265	265	280	315	265	250	290	...a	...a	400	360	410	400	365	370	370	315	275	...a	...a	300	275	315	...
16	365	270	...a	...a	235	275	265	245	325	345	330	...a	...a	290	...a	340	330	300	260	235	240	255	270	335	...
17	290	245	225	...a	...a	295	350	...a	380	...a	...a	...a	370	...a	...a	340	340	310	300	250	230	225	285	320	...
18	290	310	...a	...a	260	265	265	265	290	...a	320	325	300	320	340	325	320	305	240	230	245	270	265	260	...
19	260	p250a	300	260	240	240	240	280	...a	...a	330	320	330	305	320	310	295	295	260	235	230	225	260	270	...
20	...a	280	265	...a	...a	...a	260	...a	290	...a	330	325	315	335	300	350	300	270	265	250	225	220	300	290	...
21	250	270	p300a	310	300	290	260	610	540	430	450	400	515	430	435	385	430	340	300	270	275	...a	...a	...a	...
22	...a	270	275	...a	...a	370	...a	...a	455	430	330	400	365	325	330	315	350	325	315	275	260	265	265	260	...
23	260	260	255	225	270	250	260	430	355	365	320	325	345	405	360	395	375	325	275	235	240	260	275	290	306
24	260	...a	...a	...a	...a	230	240	260	315	360	380	420	380	390	380	345	315	315	275	245	250	270	270	300	...
25	...	...	...	...	...	255	240	230	360	310	330	335	400	350	385	390	340	320	250	235	270	290	285	290	...
26	225	280	275	290	260	245	225	230	300	325	330	330	365	380	405	370	345	305	300	270	250	260	290	280	297
27	255	240	270	275	p255f	245	215	315	...a	295	320	400	350	330	330	320	285	310	275	250	235	255	275	265	...
28	255	230	235	240	230	...a	...f	...f	340	310	335	300	365	335	320	330	300	310	270	240	220	230	290	320	...
29	325	270	...a	...a	...a	265	245	230	300	380	305	320	300	340	325	325	305	295	275	250	255	265	285	p285a	...
30	p280a	265	p265a	270	p270a	275	245	485	365	395	350	400	395	380	500	435	380	370	295	255	270	330	325	290	337
31	p280a	270	260	300	280	280	305	340	p440	...	...	p560	420	355	445	385	400	360	320	275	260	255	270	270	...
* MEAN	275	261	265	272	266	273	269	314	384	372	354	380	381	367	367	353	337	312	279	254	249	265	280	287	309

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 125

DECEMBER 1940

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1940

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.7	4.5	4.8	p4.9a	5.0	4.8	4.8	4.8	4.7	4.6	4.1	...
2	...	4.2	p4.5c	4.8	5.0	p5.0a	p5.1a	5.1	...c	...c	4.7	4.2	...
3	...	2.7	p4.0a	4.8	4.9	4.9	5.0	5.0	p4.9a	4.9	4.5	4.2	...
4	...	4.2	5.0	5.3	5.0	5.2	5.4	5.0	5.0	4.9	4.8	...	...
5	...	...	4.4	4.6	...a	...c	...c	5.1	5.0	4.8	4.7	...	...
6	3.3	4.3	4.7	4.8	p5.0a	p5.2a	5.4	5.2	5.2	4.9	4.6	4.2	...
7	...	...c	...c	5.2	5.2	5.4	p5.3a	5.0	5.1	5.0	4.7	4.3	...
8	...	4.4	4.9	...a	...a	...a	...a	...a	...a	5.2	...a	...	...
9	...	3.5	4.8	5.1	5.2	p5.3a	5.4	5.4	5.4	5.1	5.0	4.2	...
10	...	...	5.5	5.1	5.3	5.3	5.3	p5.2a	5.2	p5.1a	5.1	4.5	...
11	3.7	4.0	4.4	4.7	4.8	5.0	5.1	5.0	5.0	4.9	4.9	4.4	...
12	3.6	p4.0a	4.5	p4.8a	5.1	5.2	5.3	5.3	5.2	5.1	4.9	4.6	...
13	4.0	4.3	4.6	4.8	5.0	5.1	5.1	5.2	5.4	4.8	4.9	4.5	3.6
14	...	...a	4.7	p4.8a	4.8	4.9	5.0	p5.0a	p5.0a	5.1	...a	...a	...
15	...	4.1	...a	...a	4.9	5.0	5.0	5.2	5.2	5.0	4.8	...	...
16	...	...	4.8	5.1	...a	...a	...a	...a	...a	...a	4.8	4.3	...
17	3.7	...a	...a	...a	...a	...a	5.0	...a	...a	4.8	4.6	4.4	...
18	...	...	4.0	p4.4a	4.8	5.0	5.1	5.1	5.0	4.8	4.8	4.4	...
19	...	...	...a	...a	5.1	p5.1a	5.0	...a	...a	...a	...a	4.2	...
20	...	...	...a	...a	...a	...a	...a	...a	5.0	4.8	4.7	4.3	...
21	...	3.8	4.0	4.3	4.4	4.6	4.6	4.7	4.6	4.5	4.5	3.8	3.5
22	...	...	4.5	4.5	4.7	4.8	4.7	4.7	4.7	4.5	4.6	4.2	...
23	...	4.0	4.5	4.6	4.7	4.7	5.0	4.9	4.7	4.5	4.5	4.2	...
24	...	...	4.4	4.6	4.6	4.7	4.7	4.8	4.6	4.4	4.4	...	...
25	...	...	4.5	4.6	4.7	4.8	4.9	4.8	4.6	p4.5a	4.5	4.1	...
26	...	...	4.2	4.4	4.7	4.7	4.9	4.6	4.7	4.6	4.3	4.1	3.6
27	...	4.1	p4.3a	4.6	4.7	5.5	4.9	4.9	4.8	4.4	4.4	4.2	...
28	...	...	4.8	4.8	5.0	4.8	4.9	4.7	4.9	4.7	4.6	4.3	3.6
29	...	...	4.5	4.9	4.9	5.0	4.8	5.0	...a	...a	...a	...	...
30	...	4.3	4.4	4.5	p4.6	4.8	2.7	p4.8	4.7	4.5	4.4	4.2	3.6
31	3.3	4.0	4.3	p4.4	p4.6	4.7	4.7	4.8	4.7	4.6	4.4	4.1	3.8
* MEAN	3.6	4.2	4.5	4.7	4.9	5.0	4.9	5.0	4.9	4.8	4.7	4.2	3.6

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	215	215	...a	...a	...a	...a	230	230	210	235	...
2	...	235	...c	...a	...a	...a	...a	250	...c	...c	230	240	...
3	...	...a	...a	240	230	215	230	...a	...a	...a	...a	...a	...
4	...	225	210	225	p230a	235	200	220	210	215	240	...	...
5	...	...	...a	...a	...a	...a	...a	225	235	220	225	...	...
6	230	215	215	...a	...a	...a	220	215	285	230	220	235	...
7	...	...c	...c	225	215	215	p220a	p220a	245	240	220	240	...
8	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...	...
9	...	200	240	...a	...a	...a	220	225	210	...a	...a	250	...
10	...	...	255	...a	...a	...a	...a	...a	...a	...a	...a	...	...
11	260	220	210	200	200	240	p230a	220	p230a	245	240	225	...
12	250	...a	200	...a	...a	210	210	...a	235	...a	...a	...a	...
13	250	240	220	235	200	250	245	260	p240a	210	240	230	245
14	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
15	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...	...
16	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	255	240	...
17	250	...a	...a	...a	...a	...a	...a	...a	...a	260	...a	...a	...
18	...	...	225	...	210	200	210	215	200	225	230	250	...
19	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	245	...
20	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
21	...	230	200	230	200	250	320	220	230	235	230	215	250
22	...	...	235	220	...a	220	220	225	220	225	230	...a	...
23	...	230	255	195	...a	...a	...a	220	...a	...a	...a	260	...
24	...	...	245	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
25	...	...	...a	...a	220	...a	190	220	220	...a	235	235	...
26	...	...	...	195	225	215	225	215	...a	...a	250	...a	...a
27	...	255	...a	...a	195	225	195	...a	...a	...a	220	235	...
28	...	...	...a	225	215	225	240	215	220	225	235	225	250
29	...	...	205	280	...a	205	...a	...a	...a	...a	...a	...	...
30	...	245	...a	210	...a	...a	...a	...a	...a	...a	235	230	245
31	250	245	190	...	...	...	...	240	220	...	...	225	235
* MEAN	248	231	221	223	213	223	225	225	229	230	232	236	245

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 126

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1940 DECEMBER 1940

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	...e	0.7	0.8	0.8	0.9	0.9	0.8	0.9	0.9	0.8	0.7	0.8
2	0.5	0.6	p0.7c	0.8	0.8	1.0	0.9	1.0	p0.9c	p0.9c	p1.3	1.0	0.9
3	0.6	0.5	0.8	0.8	0.7	0.8	0.8	1.0	1.0	0.9	0.9	0.6	0.6
4	0.7	0.6	0.8	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.7	...e	...e
5	...e	0.6	0.6	0.7	0.8	p0.9c	p0.9c	0.9	0.8	0.9	0.7	0.7	...e
6	...e	...e	0.9	0.8	0.9	1.0	0.8	0.8	0.8	0.6	0.8	...e	...e
7	...c	...c	...c	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.7	0.6
8	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	...e
9	...e	0.7	0.8	0.8	0.8	0.8	0.8	1.0	1.0	0.9	0.9	...e	...e
10	...e	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	1.0	1.0	...e	...e
11	...e	0.6	0.6	0.8	0.8	0.8	0.8	1.0	1.0	0.9	0.7	0.7	...e
12	...e	0.7	0.7	0.8	0.8	0.8	1.0	1.0	0.8	0.9	0.7	0.9	...e
13	0.6	...e	1.0	0.9	0.9	1.0	0.8	1.0	0.9	0.9	0.8	0.7	0.8
14	...e	0.7	0.6	0.8	1.0	0.8	0.8	0.9	0.9	0.9	0.7	0.8	...e
15	...e	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.8	0.7
16	0.6	0.7	1.0	0.9	1.0	1.0	p1.0	1.0	0.8	0.7	0.8	0.8	0.8
17	...e	0.6	0.8	0.6	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7
18	...e	...e	...e	0.7	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.7	...e
19	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.7
20	...e	0.7	1.0	0.8	0.9	1.0	0.8	0.8	0.8	0.7	0.8	0.7	0.7
21	...e	...e	0.7	0.7	0.7	p0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
22	0.6	0.7	0.7	0.9	0.8	1.0	0.9	1.0	0.9	0.9	0.8	0.8	0.6
23	0.8	0.7	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.7
24	0.8	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.7	...e
25	0.6	0.7	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.0	0.8	0.8	0.7
26	0.7	0.7	0.6	0.9	0.8	0.7	1.0	1.0	1.0	1.0	0.9	0.8	0.8
27	...e	0.6	0.8	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.7
28	...e	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.9	0.8	0.8	0.7	0.8
29	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.7	0.8	0.7	0.7	p0.7
30	0.7	0.7	0.9	0.8	1.0	0.9	1.0	1.0	0.9	0.8	0.8	0.8	0.7
31	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.9	0.8	0.7	0.7	0.8	0.7
MEAN*	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.5	1.6	3.1	3.4	3.5	3.6	3.6	3.6	3.6	3.4	3.1	2.7	2.1
2	1.9	2.7	p3.1c	3.4	3.6	3.7	3.6	3.7	...c	...c	3.3	2.8	2.0
3	2.2	2.1	3.2	3.4	3.6	3.7	3.6	3.6	3.6	3.4	3.2	2.6	1.9
4	2.3	2.8	3.2	3.5	3.5	3.6	3.3	p3.3	p3.3	3.4	...	...	...
5	...	2.7	3.3	3.5	3.6	p3.6c	p3.6c	3.5	3.6	3.4	3.2	2.8	2.0
6	2.4	2.8	3.2	3.4	3.5	3.6	3.6	3.5	3.3	3.5	3.4	...	...
7	...	...c	...c	3.7	3.7	3.8	3.7	3.7	3.6	3.1	2.9	2.8	2.3
8	1.6	2.8	3.2	3.4	3.7	3.8	3.7	3.8	3.6	3.4	3.0	2.5	...
9	...	2.6	2.6	3.6	3.5	3.8	3.9	3.9	3.8	3.6	3.3	3.0	2.1
10	...	2.9	3.5	3.6	3.7	3.8	3.7	3.8	3.7	3.5	2.6	...	...
11	...	3.0	3.3	3.5	3.7	3.8	3.8	3.8	3.8	3.5	3.3	3.0	...
12	2.3	2.7	3.2	3.4	3.7	3.9	4.0	4.0	3.8	3.7	3.3	2.9	...
13	2.3	2.9	3.3	3.6	3.7	3.9	4.0	4.0	3.7	3.7	3.5	3.0	2.3
14	2.3	2.9	3.2	3.4	3.7	4.0	4.0	3.9	3.8	3.6	3.3	3.0	...
15	2.4	2.8	3.2	3.5	3.7	3.8	3.9	3.6	3.7	3.6	3.4	3.0	2.4
16	2.4	3.3	3.1	3.4	4.3	3.6	3.4	3.1	3.5	3.5	3.5	3.0	2.4
17	2.4	2.9	3.3	3.5	3.6	3.6	3.7	3.8	3.7	3.5	3.3	2.8	2.2
18	...	...	...	3.3	3.3	3.6	3.7	3.8	3.6	3.5	3.3	2.8	2.3
19	2.2	2.8	3.2	3.4	3.3	3.5	3.5	3.2	p2.8	3.5	3.3	2.8	2.2
20	...	2.8	3.1	3.4	3.7	3.7	3.8	3.8	3.4	3.1	3.2	2.9	2.3
21	2.1	2.6	2.8	3.2	3.0	3.7	3.2	3.2	3.7	3.4	3.4	2.7	2.3
22	2.1	2.6	3.3	3.4	3.5	3.3	3.3	3.6	3.5	3.3	3.1	2.7	2.2
23	2.0	2.6	3.0	3.3	3.5	3.5	3.6	3.6	3.5	3.4	3.1	2.8	2.2
24	2.1	2.7	3.0	3.5	3.5	3.6	3.6	3.7	3.5	3.3	3.1	2.6	...
25	2.2	2.7	3.1	3.5	3.4	3.6	3.4	3.3	3.5	3.4	3.2	2.9	2.2
26	1.9	2.6	3.0	3.3	3.5	3.7	3.6	3.6	3.6	3.4	3.1	2.8	2.2
27	2.1	2.6	3.0	3.1	3.0	3.5	3.4	3.5	3.6	3.4	3.2	2.8	2.3
28	2.0	2.6	2.8	3.4	3.5	3.8	3.8	3.7	3.6	3.5	3.3	3.8	2.2
29	...	2.6	3.0	3.3	3.4	3.5	3.7	3.7	3.6	3.5	3.3	3.0	p2.2
30	2.3	2.7	3.1	3.4	3.5	3.6	1.9	3.7	3.6	3.4	3.1	2.9	2.3
31	2.3	2.5	3.0	3.3	3.5	3.6	3.7	3.8	3.7	3.5	3.1	2.3	2.4
MEAN*	2.2	2.7	3.1	3.4	3.6	3.7	3.6	3.6	3.6	3.4	3.2	2.8	2.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 127

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1941 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JANUARY 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.5	5.2	5.0	p4.8f	4.7	4.5	5.0	5.1	5.4	6.0	6.6	7.5	7.4	8.0	7.4	7.6	8.4	8.7	8.1	7.7	7.5	7.3	7.2	6.7	6.6
2	6.8	6.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.3	7.2	7.2	...
3	6.7	5.8	5.6	5.0	4.8	4.7	p5.0f	5.9	p6.5f	7.0	7.0	p7.3a	7.2	7.2	7.2	7.0	7.3	7.3	7.3	6.9	7.1	7.0	7.2	6.8	6.5
4	6.8	6.1	p6.0f	5.8	5.3	5.6	6.8	5.9	p6.2f	7.1	9.1	9.8	10.2	11.3	10.8	9.8	8.9	8.2	7.4	7.6	7.6	7.3	7.0	p6.5f	7.6
5	6.0	5.5	5.3	p5.0f	4.7	4.8	5.4	5.8	5.7	6.1	6.7	7.2	8.0	8.5	8.4	7.8	7.7	7.5	7.7	7.5	7.3	7.4	7.1	6.6	6.6
6	5.6	...f	...f	...f	...f	...f	5.8	6.4	7.3	8.8	9.9	9.9	10.9	11.3	12.2	11.2	9.6	9.0	7.4	6.4	6.0	6.1	6.3	5.8	...
7	5.5	5.3	4.7	4.7	4.5	4.6	5.1	6.5	6.2	6.9	7.3	p7.3c	7.3	8.0	...c	...c	7.8	7.4	7.8	7.0	7.1	6.5	6.0	6.0	...
8	5.3	4.4	4.3	4.2	4.1	4.0	4.8	5.0	p5.6c	6.1	7.1	8.1	8.3	8.2	7.8	7.6	7.3	6.8	7.1	6.6	6.8	6.6	6.2	6.1	6.2
9	6.3	5.8	4.4	4.4	4.2	4.0	4.8	5.8	6.0	p4.9	6.1	6.7	7.1	7.3	6.4	7.1	7.0	7.4	6.6	6.3	6.5	6.3	6.1	6.0	6.0
10	5.6	5.9	4.9	4.3	3.6	3.7	4.8	5.3	5.5	6.0	6.9	p7.3	7.8	7.6	7.4	p7.0	7.0	6.5	6.7	6.5	6.7	6.2	5.7	5.4	6.0
11	...f	5.2	...f	...f	4.2	...f	5.2	6.0	7.4	7.3	7.8	9.1	8.5	8.6	9.4	9.0	7.9	6.9	6.3	p6.7f	p7.3f	7.2	7.2	7.0	...
12	p6.5f	5.8	4.2	...f	...f	...f	3.9	4.5	5.7	6.3	7.8	8.2	8.6	8.5	8.1	8.0	8.3	8.2	8.2	7.5	6.7	6.0	6.0	5.9	...
13	5.6	5.4	4.4	3.8	3.3	3.0	p4.0	5.2	6.3	7.0	7.8	8.7	8.2	8.3	8.4	8.4	7.8	6.7	6.6	6.5	6.7	6.0	5.4	5.4	6.2
14	5.3	4.7	4.4	3.3	3.3	3.3	4.1	4.7	5.2	5.9	6.0	6.8	7.2	7.3	7.4	7.4	7.0	7.3	7.4	7.1	7.0	6.7	6.3	6.0	5.9
15	6.0	5.0	4.6	4.0	3.6	3.6	5.1	5.4	5.8	7.0	7.7	8.4	8.8	8.8	8.1	7.5	7.2	p7.2	7.0	6.5	5.8	5.8	5.8	5.4	6.2
16	5.1	4.7	3.5	2.9	2.4	2.9	4.8	5.8	6.8	8.2	8.2	9.0	8.8	8.2	8.1	6.9	6.0	5.8	6.0	6.3	6.6	6.5	6.7	6.5	6.1
17	5.8	4.9	2.5	2.1	2.5	2.8	3.8	5.3	6.0	7.1	8.6	8.6	10.3	9.9	9.2	8.0	8.4	6.5	6.3	6.2	7.1	5.7	5.5	5.6	6.2
18	5.1	4.0	3.8	3.1	3.3	3.1	3.6	3.7	4.0	4.2	4.3	6.2	7.2	p6.9a	6.7	6.4	6.7	5.5	p5.0a	4.6	5.0	5.2	5.0	5.5	4.9
19	5.4	3.5	2.5	2.2	2.4	2.5	3.6	4.4	4.5	4.8	5.2	6.1	6.2	6.1	6.0	5.8	5.4	5.4	5.3	5.5	5.6	5.5	5.4	p5.4f	4.8
20	5.3	4.5	3.9	4.0	3.6	3.3	3.8	4.4	4.8	6.0	p6.8c	p7.6c	8.5	8.5	7.3	7.2	6.6	6.3	p6.0	6.0	5.7	5.3	5.4	5.3	5.7
21	5.0	4.3	3.8	p2.9	2.4	2.4	3.7	4.7	5.6	6.4	6.6	7.6	8.0	9.6	8.9	8.7	7.5	6.7	6.2	5.5	5.5	5.5	5.6	5.2	5.8
22	4.9	4.5	4.2	4.0	3.8	3.4	4.7	5.3	5.8	6.6	7.1	7.7	7.4	8.6	9.4	8.8	7.8	6.6	6.5	6.3	5.6	5.2	5.0	4.5	6.0
23	4.5	4.5	4.2	3.7	3.2	3.5	4.4	5.0	p5.9	6.3	6.8	7.4	7.4	8.0	8.1	7.8	7.0	6.5	6.2	6.9	6.0	5.3	4.9	5.1	5.8
24	4.7	4.3	4.1	3.9	3.8	3.7	3.7	3.8	4.5	5.0	5.8	6.0	6.3	5.8	6.1	6.3	6.1	6.1	5.5	5.6	5.3	5.2	5.3	4.8	5.1
25	4.2	3.8	3.1	2.8	2.6	2.5	3.6	5.0	5.5	6.2	6.6	7.2	6.7	7.3	7.0	6.6	6.4	6.1	6.2	6.0	5.9	5.4	5.6	5.5	5.3
26	5.4	4.9	4.1	3.3	3.0	2.8	3.9	4.5	5.0	5.4	6.5	6.7	7.5	7.5	7.6	7.5	7.4	7.4	7.2	7.5	6.8	5.6	5.8	5.6	5.8
27	5.5	...f	...a	...f	...f	p3.1a	4.8	5.7	6.7	7.3	7.5	8.1	7.8	7.9	8.4	8.1	7.5	7.5	7.1	6.6	6.6	5.9	5.7	6.0	...
28	6.2	5.5	4.3	4.0	3.7	3.3	4.2	5.1	5.3	6.0	6.7	6.8	7.3	7.6	7.3	7.7	7.5	7.4	7.2	6.9	6.6	6.3	5.9	5.7	6.0
29	5.3	5.2	...f	...a	...a	...f	...a	5.8	7.8	p9.4	9.4	9.3	9.2	9.6	9.2	9.4	9.1	7.8	7.5	7.4	6.6	6.2	6.2	6.5	...
30	6.4	5.5	4.7	4.4	3.9	3.2	4.7	5.6	6.0	6.6	p8.0c	8.6	9.0	8.6	8.8	8.9	8.4	7.8	7.7	8.3	7.9	6.7	6.4	6.5	6.8
31	6.5	6.1	5.5	5.2	5.0	4.5	5.1	6.7	7.6	8.9	9.4	9.9	10.4	10.3	9.3	8.9	8.3	7.8	7.8	8.1	7.7	7.0	6.6	6.0	7.4
MEAN*	5.6	5.0	4.3	3.9	3.7	3.6	4.6	5.3	5.9	6.6	7.2	7.8	8.1	8.3	8.2	7.9	7.5	7.1	6.8	6.7	6.6	6.2	6.0	5.8	6.2

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 128

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JANUARY 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	p290a	280	245	285	285	285	255	230	p425	370	390	335	370	330	370	380	...a	295	270	245	245	255	275	290	...
2	270	275	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	255	275	275	...
3	250	240	260	260	260	270	220	215	...f	340	365	p345a	...a	360	345	370	330	310	280	265	265	290	260	255	...
4	250	255	265	260	250	250	230	235	...f	375	340	340	345	320	290	310	300	290	p270	260	270	280	265	255	...
5	250	265	265	265	275	275	250	260	...	375	420	400	375	355	345	350	335	325	295	255	260	270	235	240	...
6	285	...f	...f	...f	...f	295	...a	...a	330	340	330	355	370	370	310	305	295	365	245	255	255	325	280	270	...
7	300	290	285	300	300	285	250	265	370	350	345	...c	400	360	...c	...c	340	330	275	265	260	260	275	255	...
8	230	290	295	285	285	285	300	225	...	p430	410	350	370	340	345	325	320	370	295	250	255	290	315	290	...
9	280	...a	265	320	300	250	290	320	395	...	p420	390	...a	345	350	350	370	315	240	250	260	285	300	310	...
10	320	245	250	...a	...a	265	235	340	p475	p440	385	p405	360	350	340	330	325	300	275	...a	...a	...a	...a	280	...
11	...a	...a	...a	260	265	265	220	295	290	320	385	315	380	355	335	290	300	275	275	p255f	p265f	270	280	270	...
12	245	200	230	275	p280a	300	255	...a	355	p370	420	330	340	310	p360a	335	310	295	275	220	250	275	270	265	...
13	270	260	255	260	280	300	235	360	345	370	325	315	355	335	320	305	300	280	260	245	240	245	260	275	29[illegible]
14	250	240	225	245	265	270	300	...	p230	370	410	355	360	345	325	320	325	295	280	250	...a	...a	265	280	...
15	260	...a	...a	...a	260	250	260	310	350	350	320	315	330	305	300	315	320	p290	300	270	295	320	260	255	...
16	270	225	240	245	290	285	245	310	310	300	320	320	310	320	330	310	310	300	290	265	285	295	285	265	289
17	230	220	300	330	275	320	500	390	385	395	350	390	320	300	300	300	290	300	250	275	220	255	330	270	312
18	280	290	270	270	280	260	260	240	245	...a	...a	400	360	...a	355	345	310	300	...a	270	265	270	300	260	...
19	255	235	230	315	310	300	265	400	p425	p540	p480	380	390	390	385	380	360	350	340	270	245	265	260	260	335
20	230	250	290	280	275	300	375	410	p510	370	...c	...c	320	315	330	325	300	280	p225	250	230	265	260	255	...
21	255	230	260	p235	250	...a	240	225	330	375	p370a	360	370	305	300	295	285	290	245	245	285	270	300	280	...
22	p260a	235	230	250	225	255	240	240	315	330	330	330	315	325	290	285	280	300	255	230	260	265	300	285	276
23	275	260	245	215	245	260	235	240	p270	p380	335	335	335	330	310	290	295	290	265	235	230	250	290	275	279
24	p285a	295	285	275	265	250	230	215	p575	p545	410	395	365	350	380	380	345	300	245	275	300	300	285	285	326
25	275	280	p295a	310	310	300	270	250	300	350	p380	335	370	310	325	320	330	325	280	260	230	290	285	280	302
26	260	270	230	...a	...a	285	...a	455	p420	p490	350	400	325	320	300	320	320	290	275	250	285	260	300	300	...
27	285	260	...a	...a	...a	...a	235	290	310	350	350	335	340	380	335	325	330	300	285	270	270	...a	320	...a	...
28	255	245	260	270	255	275	350	385	p460	410	360	400	385	355	370	330	310	295	265	250	250	280	310	260	316
29	300	250	...f	...a	...a	...a	...a	180	330	p290	300	325	360	310	310	310	290	280	270	250	315	265	305	265	...
30	250	235	255	250	220	245	235	215	385	385	p375c	345	325	335	340	325	295	300	270	290	230	270	295	300	290
31	300	275	300	275	270	310	270	280	310	280	360	310	310	305	315	320	315	300	255	240	255	270	250	...a	...
MEAN*	267	255	261	272	271	277	269	288	363	378	369	354	352	336	331	326	315	305	271	256	260	275	283	272	300

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 129

JANUARY 1941 — JANUARY 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.6	4.4	4.9	4.9	5.0	5.0	5.2	5.0	p4.8a	4.3	...
2	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
3	...	...	4.7	4.9	4.9	p5.0a	...a	...a	4.8	4.8	4.6	...	...
4	...	3.6	4.8	5.1	5.0	5.3	5.1	5.0	5.0	5.1	4.8	4.3	...
5	...	4.0	4.8	4.8	p4.9a	5.1	4.9	5.0	5.1	4.9	4.8	4.5	3.6
6	...	...	5.0	5.0	5.1	5.2	5.3	p5.2a	5.0	4.9	4.7	4.1	...
7	...	4.0	5.0	4.8	5.1	p5.2c	5.3	...a	...c	...c	...a	4.5	...
8	3.3	p4.0	p4.5	4.7	4.8	p4.9a	5.0	5.2	5.1	4.8	4.7	5.0	3.6
9	3.3	4.2	4.6	p4.7	4.7	4.9	p5.0a	4.9	5.1	4.9	4.7	4.5	...
10	...	4.1	4.9	4.7	4.8	p5.0	5.0	5.0	4.9	4.8	4.7	4.5	...
11	...	...	4.5	4.6	5.1	5.0	5.5	p5.3a	5.1	4.8	4.5	4.2	...
12	...	4.0	4.3	4.6	p4.8a	5.0	5.1	p5.0a	p4.9a	4.8	4.5	4.3	...
13	...	4.1	4.5	4.8	4.9	4.8	5.2	4.8	5.0	4.7	4.6	4.2	3.5
14	3.2	3.9	4.2	4.4	4.5	4.7	4.7	5.0	4.8	4.6	4.5	4.2	4.0
15	3.1	4.0	4.3	4.6	4.6	4.8	4.9	4.9	4.8	4.6	p4.3	...a	...a
16	...	4.3	4.3	4.5	4.6	4.7	4.9	4.8	4.7	4.5	4.4	4.2	3.7
17	3.2	3.8	4.1	4.3	4.4	4.7	4.8	4.7	4.6	4.6	4.2	4.2	...
18	...	...	...	...a	...a	...a	4.5	...a	4.5	4.5	4.3	4.0	...
19	...	3.8	4.1	4.3	4.3	4.5	4.5	4.5	4.4	4.4	4.2	4.0	3.6
20	3.2	3.7	4.0	4.4	...c	...c	4.6	4.6	4.6	p4.3	4.3	4.0	...
21	...	...	4.3	4.5	4.6	4.8	4.6	4.5	4.5	4.6	4.3	3.9	...
22	...	...	4.2	4.6	4.6	4.8	4.7	4.7	4.7	4.6	4.4	4.2	3.4
23	...	3.2	p4.2	4.9	4.8	4.7	4.7	4.8	4.7	4.5	4.5	4.1	...
24	...	...	4.0	4.2	4.4	4.5	4.6	p4.6a	p4.5	4.4	4.4	4.2	...
25	...	...	4.2	4.6	4.8	4.8	4.8	4.7	4.7	4.5	4.4	4.3	...
26	...	3.9	4.3	4.3	4.6	4.7	4.6	4.8	4.8	4.9	4.4	5.0	...
27	...	3.7	4.6	4.8	4.8	4.9	5.0	5.2	4.8	4.7	p4.4a	4.2	...
28	3.3	4.0	4.4	p4.6a	4.8	4.9	5.0	p5.0a	p4.9a	4.9	4.6	4.2	...
29	...	...	...a	...a	5.0	4.4	5.2	5.0	4.9	4.7	4.7	4.3	...
30	...	...	5.2	5.1	p4.9	5.2	5.1	p5.1b	5.1	5.0	4.7	4.3	...
31	...	4.0	4.7	4.8	5.6	4.9	5.1	5.2	5.2	5.0	4.7	...a	...
*MEAN	3.2	3.9	4.5	4.6	4.8	4.9	4.9	4.9	4.8	4.7	4.5	4.3	3.6

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	235	...a	...a	200	195	...a	...a	...a	...a	...a	...
2	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
3	...	...	210	...a	...a	...a	...a	...a	200	215	230	...	...
4	...	210	200	p210a	220	...a	...a	...a	220	225	230	225	...
5	...	225	200	215	p215a	220	195	p205a	220	210	225	235	245
6	...	...	230	220	...	235	225	...	...	225	230	220	...
7	...	250	240	235	230	...c	...a	...a	...c	...c	...a	...a	...
8	255	...	...	215	245	...a	185	250	...a	215	210	250	245
9	240	270	240	...	...a	240	p230a	225	0220a	215	220	240	...
10	...	245	...a	200	...a	p270	240	240	245	p220	...a	...a	...
11	...	...	...a	...a	215	210	...a	...a	240	240	220	215	...
12	...	225	235	215	p205a	195	225	p225a	p220a	220	220	235	...
13	...	245	245	240	p220a	205	205	230	255	215	195	215	230
14	240	230	225	200	185	...a	...a	...a	...a	215	220	250	...a
15	...	240	230	230	...a	...a	...a	...a	...a	...a	...a	...a	...
16	...	235	...a	270	...a	...a	190	200	235	215	220	p240a	250
17	275	250	225	215	220	220	205	...a	...a	...a	225	225	...
18	...	...	...a	...a	...a	...a	...a	...a	...a	...a	220	220	...
19	...	270	...a	220	200	225	215	200	195	220	220	230	240
20	270	250	215	215	...c	...c	175	200	200	p170	200	210	...
21	...	...	230	235	...a	215	...	...	200	...	...a	235	...
22	...	...	205	225	240	p240a	240	225	...a	...a	245	...a	225
23	...	215	p235	260	230	200	220	240	230	...a	...a	210	...
24	...	...	195	200	245	205	200	...a	...a	...a	...a	...a	...
25	...	...	215	...a	...a	225	...a	...a	220	...a	...a	230	...
26	...	220	220	190	200	215	...a	...a	300	215	220	240	...
27	...a	220	265	215	200	205	p210a	210	220	...a	...a	...a	...
28	260	230	215	p200a	190	215	...a	...a	...a	...a	250	235	...
29	...	...	...a	...a	...a	...a	210	185	215	215	220	210	...
30	...	...	220	200	p210	195	...a	...b	275	240	...a	...a	...
31	...	250	240	...a	220	...a	...a	...a	225	220	240	...a	...
*MEAN	257	238	225	219	216	218	210	218	228	217	223	228	239

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 130

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1941 JANUARY 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.7	1.0	0.8	1.0	0.8	0.9	1.0	0.9	0.8	0.7	0.8	...e
2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...e
3	...e	0.7	1.0	0.8	0.9	1.0	0.9	0.9	0.7	0.8	0.6	0.6	...e
4	...e	0.6	0.8	0.9	1.0	0.9	1.0	1.0	1.0	1.0	0.9	0.8	0.7
5	0.6	0.7	0.8	0.8	1.0	0.9	1.0	1.0	0.8	0.9	0.8	0.6	0.7
6	...e	...e	1.0	1.0	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	...e
7	0.7	0.7	0.8	0.9	0.9	...c	1.0	1.0	...c	...c	0.8	0.7	0.6
8	...e	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6
9	0.7	0.6	0.8	0.8	0.8	0.8	0.9	0.8	1.0	1.0	0.8	0.7	...e
10	...e	...e	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.7	...e	...e
11	...e	0.7	0.7	0.8	0.8	1.0	0.8	1.0	1.0	0.8	0.8	0.6	0.6
12	...e	0.6	0.6	0.7	0.8	0.8	0.7	0.9	0.8	0.7	0.7	0.6	0.6
13	...e	0.6	0.8	0.8	0.9	1.0	1.0	0.9	0.9	0.8	0.7	0.6	0.6
14	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.8	0.8	0.7	0.7	0.7	0.8
15	0.6	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6
16	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.8	0.7	0.7
17	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.7	0.6	...e
18	...e	0.6	0.7	0.6	0.7	0.7	p0.6	0.6	0.8	0.7	0.8	0.7	...e
19	...e	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...e
20	...e	...e	0.6	0.7	...c	...c	0.8	0.8	0.7	0.8	0.8	0.7	p0.7
21	...e	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	...e
22	...e	...e	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.9	0.8	0.7	...e
23	0.7	0.7	p0.7	0.8	0.8	0.8	0.9	1.0	0.8	0.7	0.6	0.6	...e
24	...e	...e	0.8	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.8	...e	...e
25	...e	0.7	0.7	0.9	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.6	...e
26	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.7	p0.6
27	p0.7	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	...e
28	...e	0.7	0.7	0.7	0.7	0.7	0.8	0.9	1.0	0.8	0.8	0.7	...e
29	...e	0.6	0.7	p0.8	1.1	0.9	0.9	1.0	0.9	0.8	0.8	0.7	...e
30	0.7	0.7	0.8	0.8	p0.9c	1.0	0.9	p4.3b	1.1	1.0	0.8	0.7	...e
31	...e	0.7	0.9	0.9	0.9	0.9	0.9	0.9	1.0	0.8	0.8	0.6	...e
* MEAN	0.6	0.6	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.2	2.8	3.1	3.3	3.5	3.7	3.7	3.7	3.7	3.4	3.1	...	...
2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
3	...	2.1	3.0	3.3	3.5	3.0	3.5	3.8	3.7	3.1	3.0	2.9	...
4	...	2.7	3.1	3.5	3.6	3.7	3.7	3.4	3.6	3.6	3.3	3.1	2.5
5	2.3	2.6	3.3	3.4	3.6	3.7	3.7	3.7	3.7	3.6	3.3	3.0	2.5
6	...	...	3.2	3.6	3.7	3.7	3.8	3.7	3.6	3.5	3.1	2.7	...
7	2.0	2.7	3.2	3.4	3.5	3.6	3.8	3.7	3.6	3.5	3.3	3.0	2.3
8	2.2	2.5	3.0	3.5	3.7	3.7	3.6	3.6	3.6	3.5	3.4	2.9	2.4
9	2.0	2.7	3.1	3.4	3.6	3.7	3.7	3.5	3.2	3.3	3.1	3.0	...
10	2.0	3.1	3.1	3.4	3.6	3.7	3.7	3.6	3.7	3.6	3.3	3.1	...
11	...	3.1	3.3	3.0	3.8	3.7	3.6	3.3	3.2	2.9	3.4	3.1	2.5
12	1.8	2.5	3.0	3.3	3.5	3.0	3.7	3.7	3.6	3.3	3.1	2.7	2.0
13	2.1	2.6	3.0	3.3	3.4	3.4	3.6	3.5	3.4	3.1	3.2	2.9	1.5
14	1.9	2.5	3.0	3.1	3.2	3.3	3.6	3.7	3.6	3.6	3.3	3.0	2.2
15	2.0	2.7	3.0	3.3	3.5	3.5	3.3	3.2	p3.3	p3.3	3.4	2.9	2.5
16	2.1	2.6	3.0	3.2	p3.1	3.3	3.6	3.7	3.5	3.4	3.3	2.9	2.1
17	1.9	2.6	3.1	3.1	3.4	3.6	3.6	3.6	3.4	3.2	3.1	2.8	2.4
18	...	2.4	2.8	2.9	p3.0a	3.0	3.1	3.0	3.6	3.1	3.0	...	...
19	1.9	2.5	2.9	3.1	3.4	3.1	3.1	3.5	3.4	3.3	3.0	2.7	2.3
20	2.1	2.3	2.5	3.0	p3.2c	p3.4c	3.6	3.6	3.5	3.1	3.1	2.8	p2.4
21	1.8	2.6	3.0	3.1	3.4	3.6	3.6	3.5	3.5	3.3	3.2	2.8	2.3
22	2.0	2.4	2.9	3.2	3.3	3.5	3.5	3.6	3.5	3.4	3.2	2.8	2.3
23	1.9	2.4	p2.8	3.3	3.4	3.6	3.6	3.6	3.6	3.4	3.1	2.8	p2.2
24	1.7	2.6	3.0	3.5	3.5	3.6	3.6	3.6	3.6	3.4	3.1	2.8	...
25	2.0	2.4	2.8	3.2	3.3	3.7	3.5	3.1	3.0	3.5	3.2	2.7	2.3
26	1.8	2.3	3.1	3.3	3.5	3.7	3.8	3.7	3.7	3.3	3.5	3.0	p2.4
27	p2.0	2.5	3.0	3.3	3.4	3.0	3.0	3.8	3.6	3.5	3.3	3.0	2.4
28	2.0	2.4	3.0	3.2	3.3	3.0	3.7	3.7	3.7	3.6	3.3	3.0	...
29	...	2.7	3.2	p3.0	3.5	...	3.8	3.9	3.8	3.5	3.3	2.9	2.3
30	1.8	2.5	2.8	3.0	p3.8	3.6	3.9	...b	3.8	3.7	3.4	3.0	...
31	...	2.4	3.0	3.4	3.5	3.7	3.8	3.8	3.8	3.6	3.3	3.0	2.0
* MEAN	2.0	2.6	3.0	3.2	3.5	3.5	3.6	3.6	3.6	3.4	3.2	2.9	2.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 131

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1941 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND FEBRUARY 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.3	p6.7f	5.8	4.1	3.9	3.8	4.9	5.7	6.4	p6.7a	7.6	8.2	8.6	9.0	9.1	8.3	8.0	7.9	7.6	7.2	7.0	6.2	6.2	6.5	6.7
2	6.4	5.9	5.5	4.8	4.5	4.4	4.5	5.3	5.4	6.6	p7.9c	7.3	8.3	8.4	7.4	7.6	7.4	6.9	6.7	7.3	7.5	6.9	7.0	7.2	6.6
3	6.7	5.8	5.0	4.8	4.4	4.3	4.9	5.9	p5.7	5.5	5.6	5.8	6.2	6.5	7.4	7.3	6.5	6.4	6.5	6.5	6.4	6.3	6.5	6.0	6.0
4	5.5	p5.0f	4.3	3.9	3.4	3.1	3.5	4.4	5.0	5.0	4.8	5.3	6.2	6.5	6.5	6.0	6.0	6.0	5.3	5.3	5.9	5.3	p4.7a	5.0	5.1
5	5.0	4.8	4.5	4.3	4.0	3.4	4.1	4.9	5.4	6.1	6.6	7.1	7.8	7.6	7.3	7.0	7.2	6.7	6.7	6.7	6.5	6.0	6.0	6.0	5.9
6	5.5	4.6	4.2	3.5	2.7	2.7	3.6	4.3	4.3	5.1	5.8	6.7	6.0	6.6	p6.6c	p6.5c	6.4	6.2	5.7	5.3	4.8	4.4	4.2	4.1	5.0
7	4.3	4.3	4.5	4.5	3.4	3.2	4.1	4.9	5.3	5.5	5.6	6.2	6.2	5.8	6.0	6.3	5.8	5.6	6.2	5.6	5.0	p4.5f	4.1	4.5	5.1
8	4.8	4.3	4.0	3.8	3.6	3.4	4.0	4.7	5.0	4.8	5.9	6.0	6.3	6.9	6.9	6.9	6.8	6.3	6.4	6.4	6.2	5.2	5.1	4.9	5.4
9	p5.1c	p4.8c	4.6	4.0	3.6	3.4	3.8	4.2	4.5	4.9	5.4	5.5	5.7	5.9	6.1	6.6	6.1	6.5	6.5	6.3	5.8	4.9	4.6	4.5	5.1
10	4.5	4.3	4.5	3.9	3.6	3.5	4.2	5.5	5.3	5.6	6.1	6.1	6.8	6.7	6.8	7.0	6.5	6.3	6.2	5.6	5.3	5.0	4.9	4.8	5.4
11	4.5	p4.6f	4.6	4.0	3.3	3.3	3.8	5.0	4.8	5.6	5.8	6.2	7.0	7.7	7.5	7.3	7.5	7.0	6.9	6.2	5.8	5.4	5.0	4.9	5.6
12	4.7	4.6	4.2	3.5	3.0	3.1	3.7	4.5	5.5	5.2	5.6	6.0	6.7	6.1	6.1	6.0	5.8	5.8	5.7	5.5	5.4	5.0	5.2	4.9	5.1
13	4.5	4.4	p4.3f	4.2	3.6	3.3	4.7	5.6	6.6	7.3	7.7	7.4	8.1	8.5	8.6	7.7	6.9	6.0	6.8	7.1	p6.0	5.8	5.6	5.2	6.1
14	5.5	5.3	4.7	4.5	3.4	2.8	3.8	4.7	4.5	...a	...a	6.4	p7.0a	7.6	6.4	6.6	6.5	5.8	6.3	7.0	6.9	5.7	5.5	5.3	...
15	5.2	5.3	p4.6f	3.9	...f	...a	3.5	4.3	5.0	5.5	5.8	6.5	7.0	7.1	7.3	7.4	6.6	6.2	6.0	5.6	5.8	4.9	4.2	4.2	...
16	4.5	4.6	4.1	2.9	2.8	2.8	3.4	4.4	4.9	5.3	6.1	6.8	7.5	8.5	7.7	7.5	6.8	6.6	6.4	6.1	5.9	4.8	4.5	4.4	5.4
17	4.8	5.1	p4.5f	3.9	3.8	3.3	4.3	5.0	p5.5c	6.7	7.3	7.7	8.0	8.3	8.3	6.9	7.5	6.6	6.5	6.2	5.8	5.3	5.3	5.3	5.9
18	5.3	4.4	3.5	3.4	3.2	3.1	3.7	5.6	5.7	6.2	6.9	7.3	8.0	8.0	8.3	8.2	7.8	6.6	6.4	6.2	5.7	5.0	4.7	4.4	5.7
19	4.1	4.0	3.8	3.6	3.1	2.8	3.6	5.0	5.9	7.0	6.9	7.5	8.7	7.8	8.5	9.1	8.3	7.8	7.1	6.5	6.4	5.3	5.0	4.6	5.9
20	4.5	4.3	4.1	4.0	4.0	3.7	4.2	4.8	5.0	5.7	6.5	p7.6	7.6	7.8	7.4	8.0	8.2	7.4	p7.0	7.0	6.5	5.7	5.5	5.4	5.9
21	5.4	5.1	p4.8f	4.3	3.8	p3.7f	3.6	4.6	5.7	6.4	6.1	6.6	7.2	...c	p7.9	8.1	7.6	7.5	7.5	7.1	6.5	5.9	5.6	4.9	...
22	4.7	4.7	4.9	4.7	3.8	3.6	3.6	p4.6	...c	5.6	6.0	6.0	5.7	6.1	6.3	6.7	6.3	6.5	5.9	6.0	6.1	5.0	4.8	4.8	...
23	4.7	4.7	4.3	4.0	3.8	p3.6f	3.5	4.2	5.0	5.3	5.7	5.7	5.8	6.1	6.1	5.8	6.2	6.1	5.9	5.6	5.2	4.8	4.3	...f	...
24	...f	...f	...f	...f	...f	...f	...f	4.6	5.4	5.6	6.2	7.0	6.8	6.9	7.4	7.3	6.8	7.0	6.6	6.2	5.5	5.5	5.1	p5.3f	...
25	5.6	4.8	4.3	3.5	3.1	2.9	3.8	4.8	5.6	5.9	6.2	6.3	6.4	6.7	6.3	6.3	6.0	6.5	6.5	6.3	6.1	5.8	5.3	4.6	5.4
26	4.7	p4.8f	5.0	4.7	3.9	p3.8f	3.8	4.9	5.4	6.9	6.2	6.2	6.7	7.4	7.9	7.3	7.2	7.3	6.4	6.5	6.2	5.2	5.0	4.8	5.7
27	4.8	4.8	4.7	4.5	3.7	3.1	4.1	5.6	6.8	8.3	8.7	8.6	8.9	8.7	8.9	8.8	9.0	8.9	8.0	7.5	6.4	5.0	4.8	4.6	6.6
28	4.5	4.4	4.3	4.0	4.1	4.1	4.7	6.1	6.8	7.5	8.4	8.5	8.7	9.2	9.4	8.7	8.7	8.8	9.0	8.5	7.2	6.6	5.6	5.2	6.8
29																									
30																									
31																									
* MEAN	5.0	4.8	4.5	4.0	3.6	3.4	4.0	4.9	5.4	6.0	6.4	6.7	7.1	7.4	7.4	7.3	7.0	6.8	6.6	6.4	6.1	5.4	5.2	5.0	5.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 132

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — FEBRUARY 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	320	270	230	250	255	255	245	220	310	p315a	315	325	330	330	300	310	310	290	270	260	230	265	290	265	282
2	260	260	260	270	250	245	250	235	...	290	p300c	335	305	295	330	330	305	285	240	265	270	320	280	260	...
3	255	250	255	255	270	300	315	280	p320	...	...	...	...	455	380	330	325	340	240	270	300	300	300	310	...
4	320	p300f	235	270	300	305	275	...	...	...	...	...	455	360	340	380	380	300	240	270	255	260	p280a	300	...
5	270	250	285	260	225	270	245	385	395	400	370	390	345	330	380	345	330	310	280	245	260	330	300	290	312
6	240	230	260	255	275	230	265	...	...	...	...a	350	...	385	...c	...c	375	330	275	255	235	260	280	275	...
7	p285a	300	295	260	370	290	315	...	...	435	...	400	...	...	...	340	375	365	290	230	220	300	350	315	...
8	325	265	280	310	265	285	275	325	...	...	...	...	400	320	320	320	300	300	235	240	235	260	230	365	...
9	265c	...c	260	275	270	280	240	220	200	...	...	...	...	...	...	300	340	315	240	240	200	270	265	275	...
10	295	285	260	230	265	260	235	300	330	400	380	400	370	365	355	320	320	300	240	230	260	290	p305a	320	305
11	290	p280a	265	245	280	270	250	340	220	395	410	370	330	290	315	310	300	280	260	235	195	250	275	270	289
12	275	260	180	240	220	295	285	250	340	420	...	415	335	385	370	360	320	305	240	230	265	280	275	270	...
13	265	295	p275a	250	230	280	245	235	330	290	300	350	350	335	320	300	300	315	300	235	p250	260	265	300	286
14	285	280	310	270	255	265	275	280	...a	...a	...a	355	...a	...a	320	310	290	230	250	275	265	280	275	270	...
15	290	300	p260f	220	...f	...a	255	235	...	...	395	380	350	350	335	325	330	300	280	245	250	270	270	330	...
16	275	290	255	p280a	310	265	285	250	...	...	360	325	355	290	305	290	290	280	260	240	270	270	295	p305a	...
17	315	...a	...f	...a	255	260	225	230	p225c	285	315	300	330	325	300	325	300	295	250	205	250	290	290	300	...
18	250	225	255	250	290	270	270	230	270	300	300	310	325	315	300	290	275	270	240	235	220	260	250	255	269
19	275	270	260	240	260	250	260	250	220	280	330	320	275	320	300	300	275	260	245	235	240	255	250	270	268
20	255	280	300	p280a	265	255	250	245	230	370	350	p300	315	310	320	295	280	265	p220	220	220	255	260	270	275
21	260	295	p290a	285	250	p260a	270	250	340	320	360	360	345	...c	p305c	300	275	275	250	225	230	250	250	270	...
22	270	300	280	285	275	290	290	p250	...c	...	365	...	...	...	400	330	330	235	245	235	235	250	270	270	...
23	250	260	260	260	250	260	275	245	360	...	...	...	...	...	...	...	335	315	250	240	240	255	275	...a	...
24	...a	...a	245	230	320	300	270	240	330	...	400	350	335	385	335	305	325	240	250	240	250	275	280	270	...
25	270	250	270	290	275	315	285	240	350	375	370	...	...	360	...	345	230	240	250	255	240	250	250	280	...
26	270	270	270	265	265	285	290	250	350	360	350	...	370	345	320	320	235	240	235	240	230	240	295	265	...
27	280	255	260	260	250	255	240	240	240	280	280	285	300	295	315	300	295	235	210	190	200	225	260	270	259
28	270	260	260	260	275	250	200	240	270	295	285	275	295	315	300	300	290	280	250	220	230	230	270	250	265
29																									
30																									
31																									
MEAN*	277	271	264	261	269	272	264	259	296	339	334	345	341	339	329	318	308	286	251	239	241	268	276	285	289

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 133

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.5	p4.7a	4.9	5.1	5.3	5.0	5.0a	4.9	4.7	4.3	...
2	...	...	4.8	4.8	p4.7a	5.1	5.1	5.1	5.0	4.8	4.7	4.2	...
3	3.0	3.8	p4.3	4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.6	4.4	...
4	...	3.9	4.2	4.3	4.6	4.7	4.8	4.8	4.8	4.8	4.5	4.2	...
5	...	3.9	4.3	4.5	4.8	4.8	5.0	5.0	5.2	4.8	4.8	4.4	3.8
6	...	3.9	4.0	4.3	p4.5a	4.7	4.8	4.8	p4.7c	p4.6	4.5	4.2	3.3
7	3.1	3.8	4.3	4.3	4.4	4.6	4.7	4.7	4.7	4.6	4.7	4.3	3.1
8	...	3.9	4.2	4.3	4.6	4.8	4.9	4.8	4.8	4.6	p4.3a	4.1	...
9	...	...	...	4.2	4.4	4.6	4.7	4.7	4.5	4.5	4.5	4.1	...
10	...	3.7	4.3	4.6	4.7	4.7	4.7	4.7	4.6	4.5	4.4	4.1	...
11	...	3.8	...	4.4	4.6	4.7	4.7	4.8	4.7	4.6	4.4	4.1	...
12	...	...	4.1	...a	...a	4.5	4.5	4.6	4.5	4.6	4.3	4.0	...
13	...	...	4.3	4.5	4.5	4.7	4.7	4.6	4.6	p4.4a	4.3	4.0	3.4
14	...	...	...	...a	...a	4.6	...a	...a	4.6	4.5	4.3	...	...
15	...	...	4.1	4.3	4.4	4.5	4.6	4.5	4.5	p4.4a	4.3	4.0	...
16	...	...	4.0	4.4	4.5	4.6	4.7	4.8	4.5	4.5	4.3	3.8	...
17	...	...	...	4.4	4.6	4.7	4.7	4.6	4.6	4.5	4.2	4.0	...
18	...	...	4.1	4.5	4.7	4.5	4.7	4.8	4.7	4.6	4.3	3.9	...
19	...	...	...	4.5	4.8	4.8	4.5	5.0	4.7	4.5	4.3	3.8	...
20	...	...	...	4.5	4.6	p4.7	4.8	p4.8	4.8	4.5	4.5	4.0	...
21	...	...	...	4.5	4.6	4.5	4.8	...c	p4.7c	4.6	4.3	4.0	...
22	...	...	...	4.3	4.4	4.6	4.7	4.7	4.6	4.6	4.5	...	...
23	...	...	4.2	4.3	4.5	4.6	4.7	4.7	4.8	4.6	4.4	4.1	...
24	...	...	4.2	4.4	4.5	4.7	4.8	4.8	4.9	4.6	4.5	...	...
25	...	...	4.2	4.5	4.6	4.7	4.8	4.8	4.8	4.6	...	...	...
26	...	...	4.2	4.4	4.6	4.9	4.8	4.8	4.8	4.7	...	...	...
27	...	...	...	4.6	4.7	4.9	5.0	5.0	5.0	...a	4.6	...f	...
28	...	...	...	4.8	4.8	4.9	4.9	5.2	4.9	4.8	4.5	4.2	...
29													
30													
31													
MEAN*	3.0	3.8	4.2	4.5	4.6	4.7	4.8	4.8	4.7	4.6	4.4	4.1	3.4

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...a	...a	270	220	p230a	240	...a	...a	...a	...a	...
2	...	...	210	...a	...a	235	240	...a	225	220	...a	...a	...
3	260	240	p245	215	225	205	...a	...a	230	240	225	245	...
4	...	235	220	200	200	215	230	215	215	225	220	240	...
5	...	225	270	...a	...a	...a	240	240	235	250	245	235	240
6	...	240	p220a	200	...a	...a	220	225	...c	...c	230	230	240
7	240	220	225	215	...a	...a	...a	...a	...a	235	210	265	240
8	...	275	210	205a	200	220	220	200	230	230	p225a	220	...
9	...	...	...	200	200	205	...a	200	190	175	220	190	...
10	...	230	215	200	265	250	235	240	220	210	225	230	...
11	...	225	...	200	220	210	p200a	195	220	240	230	230	...
12	...	...	250	...a	...a	...a	...a	...a	220	255	250	240	...
13	...	...	...a	200	195	230	205	220	225	...a	...a	...a	250
14	...	...	...	...a	...a	200	...a	...a	...a	225	230	...	...
15	...	...	230	285	210	p205a	200	240	...a	...a	...a	...a	...
16	...	...	230	...a	...a	230	195	220	200	230	230	230	...
17	...	...	...	225	230	200	200	220	p220a	220	230	...a	...
18	...	...	240	200	190	185	190	225	220	220	220	220	...
19	...	...	...	210	200	215	150	215	200	...a	...a	230	...
20	...	...	...	210	225	p200	210	...a	...a	240	...a	230	...
21	...	...	...	220	200	p220a	235	...c	p215c	235	235	225	...
22	...	...	...	230	...a	...a	240	225	220	220	230	...	...
23	...	...	220	215	200	p200a	p200a	230	245	230	230	230	...
24	...	...	225	220	200	...a	...a	205	215	225	225	...	...
25	...	...	240	220	205	215	195	180	230	225	...	...	...
26	...	...	220	220	205	200	200	190	215	230	...	...	...
27	...	...	...	220	220	205	200	200	...a	...a	220	...	...
28	...	...	...	225	230	220	210	200	200	220	230	230	...
29													
30													
31													
MEAN*	250	236	229	215	214	213	211	216	219	227	228	231	242

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 134

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1941 FEBRUARY 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	...e
2	...e	0.6	0.7	0.7	p0.8	0.8	0.9	0.9	0.8	0.7	0.6	0.7	0.6
3	...e	...e	0.6	0.9	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.6
4	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.6	0.6
5	...e	...e	0.7	0.8	0.8	1.0	0.8	0.9	0.9	0.8	0.8	0.7	0.6
6	0.7	0.6	0.7	0.8	1.0	0.9	0.9	1.0	...c	...c	0.7	0.7	0.6
7	...e	...e	0.7	0.8	0.9	0.9	0.9	1.0	0.9	1.0	0.9	0.7	0.6
8	0.7	0.7	0.7	0.8	1.0	0.9	0.7	0.8	0.8	0.8	0.9	0.8	0.6
9	0.7	0.7	0.8	0.7	1.0	1.0	1.0	1.0	0.8	0.9	0.7	p0.6	...e
10	...e	0.6	1.0	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.6
11	...e	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.6	0.6	...e
12	...e	...e	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.6	...e
13	...e	0.7	0.6	0.7	0.8	0.7	0.8	1.0	0.8	0.7	0.7	0.6	...e
14	...e	0.7	0.7	0.8	0.8	1.0	0.9	0.8	0.9	0.7	0.8	0.7	...e
15	...e	0.7	0.6	0.7	0.8	0.8	1.0	0.8	0.8	0.7	0.8	0.6	0.6
16	...e	0.6	0.6	0.7	0.7	0.7	0.8	p0.8	0.8	0.8	0.7	0.6	0.6
17	...e	0.7	0.7	1.0	0.9	0.9	0.8	0.9	0.8	1.0	0.8	0.7	0.6
18	...e	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	...e
19	...e	0.7	0.7	0.7	0.7	0.8	1.0	0.8	0.9	0.8	0.7	0.7	0.6
20	...e	0.6	0.7	p0.7	0.9	p0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6
21	...e	0.6	0.7	0.8	0.8	0.9	0.9	...c	p0.9	0.8	0.7	0.6	0.6
22	...e	p0.5	...c	0.6	0.8	1.0	0.8	0.8	p0.8	0.8	0.7	0.7	...e
23	...e	0.7	0.7	0.7	0.7	0.9	0.8	1.0	0.8	0.9	0.8	0.7	0.6
24	...e	0.6	0.7	0.8	0.8	1.0	0.9	0.9	p0.8	1.0	0.8	0.6	...e
25	...e	0.7	0.7	0.8	0.8	1.0	1.0	1.0	1.0	0.8	0.9	0.7	...e
26	...e	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.9	0.6
27	...e	0.7	0.8	1.0	1.0	1.0	0.9	1.0	1.2	1.0	0.8	0.8	0.6
28	...e	0.7	p4.0b	p1.8b	1.0	1.0	1.0	1.0	0.9	1.0	0.8	0.7	p1.3b
29													
30													
31													
MEAN*	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.9	2.6	3.0	3.1	3.6	3.7	4.8	3.8	3.7	3.5	3.3	3.0	...
2	2.2	2.5	2.9	3.0	p3.6c	3.7	3.8	3.8	3.7	3.5	3.4	3.0	2.4
3	1.9	2.4	2.9	3.3	3.5	3.7	3.8	3.8	3.8	3.6	3.5	3.1	2.3
4	1.7	2.4	2.7	3.3	3.5	3.0	3.7	3.7	3.7	3.5	3.2	2.9	2.2
5	...	2.4	3.0	3.0	3.3	3.1	3.6	3.7	4.0	4.0	3.4	2.9	2.3
6	1.5	2.2	2.5	3.0	3.1	3.3	3.1	3.7	...c	...c	3.2	2.8	2.3
7	1.8	2.4	2.8	3.1	3.3	3.5	3.6	3.6	3.6	3.5	3.3	2.8	2.3
8	1.7	2.2	2.7	3.0	3.1	2.9	3.0	3.2	3.5	3.4	3.2	2.8	2.2
9	1.6	2.4	2.8	3.1	3.5	3.6	3.6	3.6	3.5	3.3	3.0	2.7	2.2
10	...	2.4	2.8	3.2	3.4	3.5	3.6	3.6	3.6	3.4	3.2	2.8	2.2
11	1.7	2.3	2.7	3.1	3.3	3.5	3.6	3.6	3.5	3.3	3.1	2.7	2.1
12	1.1	2.3	2.7	3.0	3.3	3.5	3.6	3.5	3.5	3.3	3.1	2.7	2.0
13	1.6	2.3	2.8	3.1	3.3	3.4	3.3	3.1	3.1	p3.1	3.1	p2.7	2.1
14	...	2.2	p2.6	2.8	3.0	3.0	3.1	3.3	3.3	3.2	3.3	2.7	2.1
15	...	2.3	2.8	3.0	3.2	3.2	3.5	3.4	3.3	3.3	3.1	2.7	2.0
16	1.7	1.6	2.7	3.0	3.1	3.3	3.3	p3.4	3.5	3.4	3.1	2.9	2.4
17	2.0	2.3	2.6	3.1	3.3	3.3	3.6	3.6	3.0	2.9	2.7	2.4	1.9
18	1.5	2.3	2.7	3.0	3.2	3.3	3.3	3.3	3.3	3.3	2.7	2.7	2.0
19	...	2.3	2.8	3.1	3.3	3.1	3.1	3.0	3.0	p3.0a	3.0	p2.7a	1.9
20	1.6	2.4	3.1	2.3	3.3	p3.8	3.6	3.6	3.5	3.3	3.1	2.6	p2.3
21	...	2.4	2.8	3.2	3.4	3.5	3.5	...c	p3.6c	3.3	3.0	2.8	2.0
22	1.7	p2.2	...c	3.1	3.4	3.5	3.5	3.5	p3.3	3.2	3.0	2.7	...
23	1.7	2.4	2.8	3.1	3.3	3.5	3.5	3.5	3.2	3.5	3.2	2.8	2.2
24	1.6	2.3	2.8	3.1	3.3	3.4	3.4	3.6	p3.5	3.3	3.2	2.8	2.1
25	1.7	2.5	3.0	3.1	p3.3	p3.4	3.5	3.5	3.6	3.4	3.2	2.8	2.0
26	1.6	2.3	2.8	3.1	3.3	3.3	3.5	3.5	3.4	3.2	2.9	2.5	2.0
27	1.6	2.5	3.0	3.1	3.4	3.5	3.3	3.0	2.5	1.8	p1.6	2.8	2.0
28	1.6	2.3	p3.1	3.4	3.4	3.5	3.6	3.5	3.0	3.2	3.2	2.8	2.8
29													
30													
31													
MEAN*	1.7	2.3	2.8	3.1	3.3	3.4	3.5	3.5	3.4	3.3	3.1	2.8	2.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 135

MARCH 1941 — MARCH 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.0	5.0	4.9	4.8	4.5	4.2	4.7	5.9	6.6	7.4	9.0	9.3	10.1	10.2	9.3	9.7	10.1	10.5	11.2	11.0	10.1	8.6	5.4	...f	...
2	...f	...f	...f	...f	...f	...f	2.9	3.9	3.3	3.3	3.7	4.1	4.2	4.3	4.5	5.5	5.1	5.0	5.3	4.8	5.0	5.2	4.8	4.9	...
3	4.3	3.4	3.3	2.9	2.4	2.2	3.2	4.1	4.4	5.0	5.4	6.2	7.8	8.5	8.3	8.4	7.9	7.9	7.3	7.3	6.9	6.1	6.4	6.5	5.7
4	6.0	5.5	5.4	4.7	4.8	4.8	p5.2c	6.0	6.6	7.2	9.0	p9.8c	10.5	10.4	9.5	9.6	10.1	9.2	8.4	7.3	7.2	6.1	5.6	5.3	7.3
5	5.3	4.8	4.8	4.5	4.0	3.2	4.7	5.3	6.5	6.8	7.3	7.5	9.0	8.5	9.3	10.0	8.8	7.8	7.9	7.0	6.3	5.4	4.6	4.5	6.4
6	4.4	4.2	4.2	3.5	3.2	3.3	4.2	5.3	6.9	7.2	6.9	8.1	8.7	9.1	8.6	3.7	8.7	7.8	7.8	6.0	5.6	5.0	4.5	4.5	6.1
7	4.5	4.3	4.1	...f	...f	...f	4.1	5.6	5.6	6.4	7.3	8.0	[illegible]	8.3	7.9	7.6	7.2	7.3	6.7	7.3	6.1	5.4	5.1	4.7	...
8	4.3	4.1	4.0	3.8	3.7	3.7	3.8	5.8	6.2	6.9	8.7	9.1	9.1	9.3	8.3	7.9	7.8	7.2	7.0	6.9	5.8	5.0	4.6	4.4	6.2
9	4.2	4.1	4.1	3.7	3.5	3.4	3.9	4.8	5.1	5.9	6.7	6.5	7.1	7.9	7.8	7.5	7.6	7.5	6.6	6.3	5.3	4.6	4.4	4.0	5.5
10	3.6	3.7	4.2	4.1	3.4	3.3	3.8	5.2	6.6	...c	...c	...c	8.2	8.8	...c	...c	7.4	6.8	6.6	6.2	6.0	5.9	5.4	4.0	...
11	4.2	4.0	3.7	3.7	3.5	3.2	3.8	5.8	7.0	6.7	6.9	7.7	8.2	8.8	8.6	8.0	8.0	7.0	6.8	6.3	5.9	5.6	5.0	4.5	6.0
12	4.2	4.2	4.2	4.1	3.8	3.3	3.7	5.5	7.3	8.7	8.9	8.0	8.8	8.4	8.5	8.5	8.3	7.7	7.8	6.5	4.7	4.3	4.3	4.5	6.2
13	4.5	4.7	4.9	3.5	p3.2f	3.0	3.6	5.5	6.6	7.8	7.8	8.5	9.2	10.0	9.8	9.0	8.5	7.9	7.5	6.3	5.1	4.7	4.6	4.3	6.3
14	4.3	4.3	4.4	4.2	3.6	3.5	4.3	6.2	7.6	8.7	10.3	8.6	12.0	10.2	10.5	9.5	8.2	8.5	8.0	7.9	7.0	6.4	6.5	6.0	7.1
15	5.8	4.7	4.8	3.8	3.2	2.7	3.1	4.0	4.6	5.6	6.7	7.2	7.2	8.5	9.0	8.8	8.5	8.1	8.0	6.1	4.9	4.7	4.5	4.3	5.8
16	4.4	4.3	4.1	3.9	2.9	2.6	3.0	4.6	5.3	6.0	7.1	7.6	8.0	8.9	8.9	8.9	8.7	8.8	7.9	6.0	4.0	3.3	3.3	3.3	5.7
17	3.4	3.5	3.6	3.7	3.7	3.2	3.8	5.3	5.9	6.8	7.3	9.3	8.8	9.0	8.5	8.0	7.8	7.4	7.5	6.3	4.4	3.9	4.1	4.0	5.8
18	3.9	3.8	3.8	3.9	3.9	3.4	4.0	5.9	6.6	7.4	8.0	8.0	9.2	8.3	9.4	8.9	9.2	8.1	7.8	6.5	5.1	4.2	4.2	4.2	6.1
19	4.0	3.8	4.0	4.2	4.0	3.7	4.0	5.6	7.0	7.2	7.8	8.7	8.0	8.7	9.8	10.2	9.0	9.7	9.6	8.4	7.0	6.2	5.6	5.6	6.7
20	5.0	5.5	4.3	3.7	3.1	2.8	3.0	4.4	5.4	5.7	6.5	7.0	8.6	8.8	9.3	9.6	9.4	10.1	9.6	7.2	6.1	5.1	5.2	5.0	6.3
21	5.4	5.1	4.8	4.9	4.8	4.2	3.7	4.8	5.2	6.0	p6.5	7.9	8.8	9.2	9.2	9.2	8.3	8.8	8.4	6.8	5.5	4.7	4.2	4.1	6.3
22	3.8	3.9	4.0	4.1	3.2	3.3	3.6	5.3	6.2	6.0	7.0	p8.5	9.4	10.6	11.0	10.0	9.5	9.4	8.3	6.0	5.6	4.7	4.6	4.3	6.4
23	...f	...f	...f	...f	2.5	p3.0f	3.7	5.6	6.7	6.7	8.0	9.6	9.4	8.7	10.0	9.8	9.3	9.0	8.1	5.5	5.0	4.5	4.3	4.0	...
24	3.6	4.0	4.0	3.8	3.6	3.3	5.4	5.7	6.4	7.2	9.0	9.4	9.2	9.0	9.1	9.3	9.1	8.7	7.8	5.8	4.9	4.8	4.6	4.5	6.2
25	4.4	4.3	4.3	4.3	3.9	3.2	4.2	5.9	7.3	7.8	7.5	8.4	8.9	8.9	9.4	9.7	9.6	9.4	7.4	6.0	4.7	4.5	4.3	4.3	6.4
26	4.1	3.8	3.6	3.3	3.0	3.0	3.8	5.8	6.8	7.5	7.5	8.5	9.6	10.0	9.9	10.2	9.8	9.7	8.6	6.1	5.0	4.8	4.7	4.5	6.4
27	4.3	p4.3f	p4.2f	4.1	3.6	3.4	3.9	5.9	7.0	7.8	7.8	8.3	9.4	9.8	10.0	10.0	10.0	9.8	9.2	7.3	p5.2	4.7	4.5	4.4	6.6
28	4.3	4.3	3.9	3.7	3.9	4.0	4.3	6.7	8.2	9.3	8.5	8.3	9.6	10.7	10.0	10.0	10.2	9.4	8.0	8.9	7.2	7.0	7.0	5.5	7.2
29	4.5	4.0	3.9	3.9	3.6	3.1	3.0	3.6	4.3	...	...	4.6	4.9	p5.0	5.3	5.1	5.9	5.6	5.2	4.5	p4.2a	4.0	4.1	4.3	...
30	4.1	4.1	...f	...f	...f	...f	...f	4.1	5.4	5.0	5.5	5.5	5.7	5.9	5.9	5.9	6.0	5.5	5.1	4.1	4.2	3.8	3.6	3.4	...
31	3.3	3.2	2.8	...f	...f	...f	p3.2	3.3	3.3	3.7	3.8	...c	...a	...a	...a	4.0	4.2	4.0	4.0	3.7	4.3	3.9	3.6	4.0	...
MEAN*	4.4	4.2	4.2	4.0	3.6	3.3	3.8	5.2	6.1	6.7	7.3	7.8	8.5	8.8	8.8	8.6	8.3	8.0	7.6	6.5	5.6	5.1	4.8	4.5	6.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 136

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1941 MARCH 1941

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	270	270	260	240	215	240	230	220	285	290	300	300	305	350	335	445	390	295	230	250	240	400	...a	...
2	...a	...a	...a	...a	...a	...a	...a	...a	285	...a	...a	...a	190	...a	210	...a	340	250	270	270	275	285	280	280	...
3	290	290	295	260	280	280	270	265	240	...	...	380	320	300	310	290	290	275	255	245	240	250	265	240	...
4	270	270	300	320	290	240	p240c	225	220	285	290	p290c	285	280	300	295	270	240	230	240	230	250	245	270	266
5	270	270	265	220	260	280	230	240	275	330	285	340	295	330	300	265	260	235	240	230	230	250	270	280	269
6	250	270	280	270	310	300	270	235	235	280	300	310	300	285	310	280	270	255	240	220	245	240	285	270	271
7	270	275	270	250	275	p260a	240	240	220	340	295	295	295	280	280	270	240	240	240	225	220	235	250	235	260
8	240	250	250	255	260	280	270	240	245	300	280	295	295	275	280	290	270	240	240	225	205	240	245	250	259
9	250	250	240	235	255	270	280	240	...	360	305	310	340	320	300	300	280	240	240	220	220	240	250	230	...
10	270	300	250	215	220	270	245	250	270	...c	...c	...c	315	300	...c	...c	270	255	240	225	240	245	240	225	...
11	220	235	255	270	255	250	260	255	260	260	305	310	295	300	280	285	270	240	235	230	240	230	235	215	258
12	240	250	240	230	220	275	270	235	280	270	260	260	285	295	280	280	270	230	235	215	225	270	290	290	258
13	275	250	255	220	p240f	260	275	250	300	270	285	300	320	290	275	280	280	240	240	230	245	240	255	260	264
14	260	265	265	260	p250a	240	270	255	275	280	300	375	280	290	290	280	290	240	240	250	230	285	290	270	272
15	255	275	250	265	265	275	275	250	330	325	275	300	300	295	285	265	260	240	230	210	250	270	260	280	270
16	265	p280a	p290	245	245	250	280	260	285	295	p295	290	310	285	290	265	270	240	235	205	190	270	260	280	266
17	275	270	240	270	235	235	240	235	220	280	300	280	290	280	275	280	260	235	240	210	215	270	265	255	256
18	260	260	265	240	230	220	240	230	230	275	265	275	290	300	275	295	260	225	225	210	225	245	260	240	252
19	290	250	255	240	220	225	225	235	225	270	280	275	300	300	295	270	265	255	235	210	215	230	265	295	255
20	275	225	230	230	245	295	220	280	285	295	295	355	300	300	280	280	280	240	230	210	235	260	250	290	266
21	300	260	290	240	250	225	265	245	360	320	p350	310	295	295	275	270	280	255	225	220	200	240	255	270	271
22	320	p315a	265	220	280	320	285	285	270	290	305	p290	310	290	275	270	250	235	230	220	255	240	270	280	274
23	260	285	260	275	290	290	250	240	250	245	315	280	285	300	280	265	265	235	220	205	225	240	245	255	261
24	275	270	260	245	245	240	250	255	280	290	270	275	250	285	290	265	270	240	225	210	260	250	260	260	259
25	245	255	260	225	225	230	200	230	230	250	250	290	290	285	280	270	260	240	220	200	215	270	290	265	249
26	265	265	250	260	250	270	240	225	225	250	275	300	280	275	290	270	260	250	215	205	220	250	250	270	255
27	250	p250a	p250	240	220	245	230	225	240	265	260	280	280	275	290	270	250	240	220	205	p220	250	235	255	248
28	235	230	240	235	285	265	245	235	250	250	245	260	300	280	280	270	255	235	240	240	225	240	235	245	251
29	285	310	310	280	275	305	320	265	...	...	...	...	...	...	...	400	290	250	285	...a	...a	265	270	255	...
30	270	250	260	270	280	280	275	255	280	...	360	...a	395	385	340	360	315	275	225	250	255	260	275	305	...
31	290	270	285	320	280	235	310	290	260	210	...	...	...a	...a	...a	...	260	275	330	280	290	325	...a	245	...
MEAN*	266	265	263	252	256	261	257	247	260	283	290	301	296	296	288	286	277	250	241	225	233	254	265	262	266

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EOUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 137

MARCH 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1941

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.5	4.8	p5.0a	5.1	5.0	5.0	4.8	4.8	4.3	...
2	...	...	...	...	...	...	...	3.8	...	4.4	4.0	...	...
3	...	...	3.1	4.3	4.4	4.7	4.7	4.8	4.8	4.7	4.3	...	...
4	...	...	...	4.6	4.8	p4.8c	4.9	4.8	4.7	4.6	4.4	...	...
5	...	...	4.1	p4.4a	4.6	4.8	4.7	4.8	4.8	4.4	4.2	...	...
6	...	...	...	4.3	p4.5a	4.8	p4.8	4.8	4.8	4.5	4.3	...	...
7	...	...	...	4.5	4.6	4.6	4.6	4.7	4.7	4.3	p4.1	...	...
8	...	...	...	4.5	4.5	4.7	4.8	4.7	4.7	4.6	...	...	...
9	...	...	2.7	4.2	4.5	4.7	4.6	4.7	4.7	4.5	4.2	...	...
10	...	...	4.2	...c	...c	...c	4.8	4.7	...c	...c	4.3	3.8	...
11	...	3.5	4.2	4.3	4.7	4.7	4.7	4.8	4.6	4.6	4.1	...	...
12	...	...	4.3	4.5	4.3	4.6	4.8	4.8	4.7	4.6	4.3	...	...
13	...	...	4.3	4.5	4.6	4.7	4.7	4.7	4.7	4.6	4.2	...	...
14	...	...	4.2	4.4	4.5	5.4	4.8	4.6	4.8	4.4	4.1	...	...
15	...	...	3.9	4.1	4.4	5.2	4.8	4.8	4.7	4.5	4.2	...	...
16	...	...	4.0	4.3	p4.7	4.7	4.8	4.7	4.7	4.5	4.1	...	...
17	...	...	...	4.6	4.7	4.7	4.8	4.8	4.7	4.5	4.2	...	...
18	...	...	...	4.5	4.7	4.7	4.9	5.0	4.7	4.7	4.3	...	...
19	...	...	...	4.6	5.0	4.8	5.0	4.9	4.9	4.6	4.2	...	...
20	...	3.2	4.0	4.2	4.7	4.9	4.9	4.9	4.8	4.6	4.5	...	...
21	...	...	4.0	4.3	4.8	4.7	4.8	5.0	4.7	4.5	4.5	...	...
22	...	3.3	4.0	4.4	4.8	...	4.9	5.0	4.8	4.7	...	...	...
23	...	...	...	4.6	5.0	4.4	4.8	4.3	4.4	4.5	4.6	3.7	...
24	...	3.1	4.3	4.8	4.8	4.8	4.8	4.8	4.7	4.4	4.3	...	...
25	...	...	...	4.5	4.7	5.0	5.1	4.9	4.9	4.7	4.2	...	...
26	...	...	...	4.5	4.7	5.0	5.0	4.8	5.0	4.6	4.3	...	...
27	...	...	4.0	4.6	5.0	5.0	4.8	4.8	4.8	...	...	...	...
28	...	...	4.0	4.6	4.6	4.3	4.5	4.8	4.9	4.8	4.3	3.3	...
29	...	...	3.7	4.0	4.1	4.1	4.2	p4.3	4.4	4.2	4.0	...	...
30	...	...	3.8	4.0	4.3	...a	...a	4.5	4.3	4.3	4.1	3.3	...
31	...	...	...	...	3.6	3.5	...a	...a	...a	3.9	...	...	...
* MEAN	...	3.3	3.9	4.4	4.6	4.7	4.8	4.7	4.7	4.5	4.3	3.7	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	...a	...a	185	210	220	215	250	245	...
2	...	...	...	...	...	...	...	...	...	245	230	...	...
3	...	...	...	235	200	195	190	195	220	215	245	...	...
4	...	...	...	205	210	p210c	210	200	230	225	240	...	...
5	...	...	245	p240a	240	p230a	220	225	230	230	220	...	...
6	...	...	...	240	p225a	210	...	...a	225	235	245	...	...
7	...	...	...	215	205	205	195	200	220	220	p210	...	...
8	...	...	...	210	200	210	200	220	220	210	...	...	...
9	...	...	...a	225	245	200	190	195	225	225	230	...	...
10	...	...	225	...c	...c	...c	205	235	...c	...c	230	225	...
11	...	240	220	205	200	190	190	180	225	220	235	...	...
12	...	...	250	225	205	230	195	200	240	225	230	...	...
13	...	...	240	225	220	195	200	210	225	225	230	...	...
14	...	...	240	230	225	220	220	220	215	230	235	...	...
15	...	...	255	205	195	190	190	210	210	220	210	...	...
16	...	...	235	210	p200	185	200	190	205	220	230	...	...
17	...	...	...	230	200	200	200	210	225	210	220	...	...
18	...	...	...	215	200	200	220	200	200	200	215	...	...
19	...	...	...	210	195	195	195	195	240	245	210	...	...
20	...	245	220	230	205	p200	235	...a	235	...a	240	...	...
21	...	...	240	215	200	195	190	210	230	225	225	...	...
22	...	230	210	230	220	...	180	170	250	230	...	...	...
23	...	...	...	220	205	185	220	190	200	200	240	230	...
24	...	240	225	p220a	210	200	205	205	225	220	230	...	...
25	...	...	...	225	200	200	195	175	210	225	230	...	...
26	...	...	...	210	200	200	195	220	220	225	235	...	...
27	...	...	220	205	220	185	225	240	230	...	...	...	...
28	...	...	225	215	205	190	p195a	200	230	240	...a	...a	...
29	...	...	240	210	225	210	220	p230	p230a	235	260	...	...
30	...	...	225	210	230	...a	...a	215	210	225	225	245	...
31	...	...	...	...	...	...	...a	...a	...a	250	...	...	...
* MEAN	...	239	232	212	211	193	202	206	223	225	231	236	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 138

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY* OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.7	0.7	0.9	0.9	1.0	1.2	0.9	0.8	1.0	0.7	0.6	1.6	2.4	2.8	3.2	3.4	3.5	3.4	3.4	3.4	3.5	3.1	2.8	2.0
2	...	0.7	0.8	0.9	0.8	0.9	1.0	0.8	1.0	1.0	0.8	0.7	0.6	...	1.9	2.4	3.0	3.1	3.1	3.4	3.1	3.4	3.1	3.0	2.5	2.2
3	...	0.7	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.2	1.0	0.8	1.6	2.3	2.7	3.1	3.3	3.4	3.4	3.4	3.3	3.1	3.0	3.1	2.0
4	...	0.7	0.7	0.7	0.8	p0.9c	1.0	1.0	0.9	0.9	0.7	0.7	...e	1.6	2.2	2.8	3.1	3.3	p3.3c	3.3	3.6	3.4	3.3	3.3	2.6	...
5	...	0.7	0.7	0.8	0.8	1.0	0.9	1.0	1.0	1.0	0.8	0.8	0.7	1.0	2.1	2.7	3.0	3.4	3.4	3.5	3.5	3.4	3.2	3.0	2.5	2.0
6	...	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.6	1.2	2.0	2.5	3.0	2.8	2.9	3.0	2.5	3.4	3.5	3.0	2.5	1.7
7	...	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...e	...	2.2	2.8	3.0	3.2	3.4	3.4	3.4	3.3	3.5	p3.1	2.6	1.8
8	...	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	1.0	2.1	2.7	3.0	3.2	3.2	3.3	3.4	3.4	3.3	3.0	2.5	1.9
9	...	0.7	0.7	0.7	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.6	...e	1.4	2.2	2.4	2.7	3.1	3.3	3.0	3.3	3.4	3.5	3.0	2.6	2.8
10	...	0.7	0.7	...c	...c	...c	0.7	0.8	...c	...c	0.7	0.7	0.5	1.4	2.0	2.5	...c	...c	...c	3.5	3.4	...c	...c	3.0	2.6	1.8
11	...	0.7	0.8	0.7	0.8	1.0	0.8	0.9	0.7	0.7	0.8	0.6	...e	1.2	2.2	2.7	3.1	3.3	3.3	3.3	2.9	3.5	3.3	3.0	2.5	...
12	...	...e	0.7	0.7	0.8	0.7	1.0	0.8	0.8	0.8	0.7	0.7	0.6	...	2.4	2.7	3.3	3.3	3.4	3.4	3.2	3.4	3.2	2.9	2.3	1.6
13	...	0.6	p0.7	0.7	0.7	0.8	0.9	1.0	0.8	0.8	0.7	0.6	...e	1.4	2.0	2.7	3.1	3.3	3.3	3.4	3.3	3.4	3.2	2.9	2.4	...
14	...	0.7	0.7	0.7	0.8	0.8	1.0	1.0	0.9	0.9	0.8	0.6	...e	1.4	2.3	2.6	2.9	3.1	3.3	3.5	3.3	3.3	3.1	2.8	2.2	1.8
15	...	...e	0.7	0.7	0.7	0.9	0.8	1.0	0.9	0.8	0.7	0.6	...e	1.1	2.2	2.6	2.9	3.1	3.3	3.3	3.3	3.4	3.1	2.5	2.4	...
16	...	...e	0.6	0.7	p0.7	0.8	0.9	0.8	0.8	0.7	0.7	0.7	...e	...	2.0	2.5	2.9	p3.2	3.2	3.4	3.4	3.3	3.2	3.0	2.5	...
17	...	...e	0.6	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.6	...e	1.4	2.0	2.5	2.9	3.2	3.3	3.3	3.3	3.3	3.3	3.0	2.5	1.8
18	...	0.6	0.6	0.8	0.8	0.9	1.0	0.9	0.9	0.8	0.7	0.7	...e	1.3	2.0	2.7	3.1	3.3	3.4	3.3	3.2	3.3	3.1	2.5	2.4	1.4
19	...	0.6	0.6	0.7	0.8	0.8	1.0	1.0	1.0	0.8	0.9	0.8	...e	1.3	1.9	2.6	3.0	3.4	3.5	p3.4	3.2	3.5	3.2	3.0	2.6	1.7
20	...	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.7	0.7	p0.6	1.5	2.4	2.6	3.0	3.4	3.0	2.7	3.0	2.8	3.0	2.9	2.3	p2.2
21	...	0.6	0.6	0.8	0.6	0.8	1.0	1.0	0.8	0.8	0.7	0.6	...e	1.4	2.0	2.8	3.0	3.2	3.3	3.4	3.3	3.3	3.2	2.9	2.4	1.4
22	...	0.7	0.7	0.6	0.8	0.8	0.8	0.7	0.9	0.8	0.7	0.6	...e	1.3	2.0	2.7	3.6	3.1	3.8	3.5	3.4	3.4	3.2	3.3	2.4	1.8
23	...	...e	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.7	0.7	0.7	0.6	...	1.8	2.8	3.4	3.3	3.6	3.5	3.6	3.8	3.5	3.5	2.7	1.6
24	...	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.6	...e	1.2	2.3	2.6	3.0	3.2	3.3	3.0	2.6	2.8	3.2	2.9	2.3	...
25	...	0.6	0.7	0.6	0.8	0.8	1.0	0.8	0.8	0.7	0.6	0.7	0.6	1.0	2.1	2.7	3.2	3.2	3.3	3.5	3.4	3.3	3.2	2.8	2.4	1.1
26	...	...e	0.7	0.6	0.7	0.7	0.9	0.9	0.8	0.7	0.7	0.6	0.7	...	1.8	2.6	2.9	3.1	3.2	3.4	3.0	3.4	3.2	3.0	2.3	1.5
27	...	0.6	0.7	0.7	0.7	0.6	0.8	0.9	0.8	0.7	0.7	0.6	...e	1.2	1.8	2.7	3.1	3.9	3.6	3.5	3.5	3.4	3.2	2.9	2.2	1.4
28	...	0.6	0.7	0.7	0.9	1.1	0.9	0.8	0.8	0.7	0.7	0.6	...e	1.2	1.8	2.6	2.9	3.1	3.0	3.3	3.5	3.4	3.3	2.9	2.4	1.6
29	...	0.6	0.7	0.7	0.6	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.5	1.6	1.9	2.4	2.7	2.9	3.1	3.1	2.7	2.5	3.1	3.5	2.2	1.1
30	...	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.6	0.5	...	2.0	2.6	2.8	3.0	3.0	2.9	3.3	3.3	3.0	2.7	2.3	...
31	...	0.6	0.7	0.7	0.7	0.6	0.8	0.8	0.8	0.7	0.7	0.7	...e	1.6	2.2	2.1	2.5	3.0	3.1	3.4	3.3	2.0	p2.0	3.0	2.2	1.7
MEAN*	...	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.6	1.3	2.1	2.6	3.0	3.2	3.3	3.3	3.2	3.3	3.2	3.0	2.5	1.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 139

APRIL 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1941

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.9	2.4	1.8	1.8	1.8	1.8	2.8	5.5	6.5	7.4	7.0	7.5	8.3	8.6	8.8	8.7	7.9	6.7	6.0	4.6	4.5	4.5	4.6	4.9	5.3
2	...f	...f	...f	...f	...f	...f	...f	5.3	6.9	8.5	7.7	8.4	9.7	10.7	10.4	10.4	10.3	9.1	7.4	5.6	4.8	4.0	3.5	3.3	...
3	...f	...f	...f	3.0	3.4	3.3	3.6	5.6	7.2	9.1	8.2	8.2	9.0	9.2	9.9	10.8	10.1	8.9	7.0	5.5	4.1	3.9	3.9	3.9	...
4	3.7	3.8	3.7	4.2	3.6	3.0	3.8	5.8	8.0	9.4	9.3	9.6	9.4	10.0	10.7	10.0	9.2	8.7	7.2	5.5	4.6	4.0	4.2	...f	...
5	...f	...f	...f	...f	3.6	...f	...f	5.7	7.1	7.6	7.8	8.5	8.0	9.0	9.3	9.9	10.1	9.5	8.0	5.1	3.6	3.9	4.0	3.9	...
6	3.8	3.8	3.8	4.0	4.0	3.9	3.6	5.9	7.1	8.3	8.5	8.7	.8	9.3	10.2	10.4	10.1	9.4	8.6	p5.7c	4.1	4.1	4.0	...f	...
7	...f	...f	...f	...f	4.2	...f	...f	6.3	8.	8.7	8.7	8.1	8.4	9.1	9.2	9.0	8.4	8.4	6.5	4.9	4.1	4.5	4.4	4.5	...
8	4.6	4.6	4.2	4.2	4.1	4.1	4.1	6.3	7.0	7.4	p8.9f	9.2	8.5	8.1	8.4	9.1	9.5	9.5	8.0	5.8	5.0	p4.7f	4.4	4.7	6.4
9	4.7	p4.8f	4.8	5.0	4.0	3.3	...c	...c	...c	7.1	7.9	8.4	8.9	9.2	9.5	10.8	9.4	9.0	8.8	6.5	4.9	4.3	4.0	4.0	...
10	4.3	4.3	4.5	4.3	3.4	3.3	3.3	5.4	7.3	9.2	8.8	.6	8.3	9.0	...c	...c	...c	9.7	8.5	5.0	4.3	4.0	4.1	4.1	...
11	3.9	4.2	4.3	4.5	4.4	3.3	3.0	5.6	7.8	8.4	8.6	9.9	10.2	9.6	10.1	10.7	9.4	9.0	8.3	7.1	5.7	3.7	3.9	3.9	6.6
12	4.0	3.9	4.2	4.4	3.7	3.3	3.5	5.8	6.9	8.5	9.5	p9.5	9.8	10.9	11.3	11.6	11.5	9.7	7.3	4.7	3.7	3.6	3.5	3.6	6.6
13	4.2	4.2	4.5	4.2	3.6	...c	...c	...c	...c	7.7	8.4	7.9	8.3	8.5	9.0	9.9	8.9	7.9	6.5	3.9	3.2	3.4	3.5	3.6	...
14	3.7	3.7	3.9	3.8	...c	...c	...c	...c	p6.5	8.0	8.4	7.9	7.6	8.0	8.8	9.6	9.8	9.1	...c	...c	...c	3.5	3.5	3.8	...
15	4.0	4.0	4.0	4.0	4.2	3.6	...c	...c	...c	7.7	8.2	7.4	7.0	7.7	8.6	9.2	9.0	6.7	5.7	4.3	3.7	3.7	3.9	3.9	...
16	3.9	4.1	4.0	4.0	3.8	3.3	2.7	5.3	6.5	7.0	7.9	7.8	9.5	9.6	9.6	9.7	9.3	8.7	7.7	4.3	4.7	4.3	4.0	4.5	6.1
17	4.3	3.9	3.4	3.4	3.3	3.4	3.7	6.2	8.1	7.8	8.4	8.4	8.4	9.0	9.1	9.2	10.0	7.9	6.5	4.9	4.6	4.2	4.2	4.1	6.1
18	4.2	4.2	3.5	3.7	3.6	3.3	3.3	5.9	7.7	8.8	9.0	8.3	9.5	8.5	8.6	9.8	10.0	8.9	6.6	5.4	4.7	4.8	4.6	4.1	6.3
19	3.7	3.5	3.3	3.4	3.1	2.5	2.5	5.6	6.7	8.3	8.7	9.2	7.4	8.7	8.8	10.5	10.9	9.8	8.9	5.1	4.5	4.5	3.7	3.6	6.1
20	3.6	4.0	3.5	3.7	3.9	.9	3.9	6.5	8.4	.3	9.4	9.6	7.9	8.7	9.8	9.3	8.5	9.0	6.6	4.2	4.0	3.8	3.8	3.5	6.2
21	3.2	p3.4f	3.6	3.9	3.6	2.9	2.7	...c	...c	7.8	8.9	9.0	8.1	8.1	8.3	8.6	7.7	7.4	6.0	4.7	4.0	4.0	3.7	4.0	...
22	3.8	3.8	3.6	3.2	3.2	3.0	3.0	5.6	7.1	7.8	9.3	9.7	8.3	7.3	8.4	8.6	8.8	7.7	5.7	3.7	3.3	3.4	3.2	3.5	6.8
23	3.6	3.6	3.6	3.3	3.6	3.1	...c	...c	...c	6.9	8.5	8.9	8.5	8.0	7.9	8.5	8.3	7.4	5.5	3.7	3.2	3.7	3.3	3.5	...
24	3.6	3.6	3.6	3.6	3.3	3.2	3.0	5.2	6.5	7.1	.9	9.6	8.6	7.7	8.3	8.8	8.5	7.2	5.1	5.0	5.0	5.1	4.4	4.3	5.8
25	4.2	4.3	4.0	3.5	3.3	3.0	2.5	3.5	4.5	4.7	5.0	5.0	5.0	5.2	5.0	5.0	4.8	4.7	3.9	3.1	2.9	p2.9a	2.9	2.9	4.0
26	...a	...f	...f	3.2	2.8	2.8	p3.5f	4.2	5.0	6.2	7.0	6.5	6.6	7.2	7.2	3.0	6.6	6.0	4.7	3.9	3.1	3.0	2.8	2.8	...
27	2.7	p2.8f	p2.9f	3.0	3.0	...f	...f	4.6	p6.0c	6.2	p6.5c	6.9	7.6	7.7	8.0	7.4	6.6	6.4	4.8	3.2	2.8	3.2	...f	...f	...
28	3.3	3.5	3.6	3.9	4.0	2.7	p2.7	...c	p6.5	8.0	8.1	6.6	7.8	8.3	9.8	8.3	6.0	5.0	3.9	3.5	3.6	3.6	p3.8	4.3	...
29	4.0	3.9	...c	...c	...c	...c	...c	...c	...c	...c	7.2	6.0	6.3	6.6	6.5	6.1	5.7	5.8	5.9	4.2	...f	...f	...f	...f	...
30	...f	...f	...f	...f	...f	...f	...f	4.3	5.7	6.3	6.8	7.2	6.7	6.6	7.7	8.3	7.1	6.0	4.8	3.4	...f	...f	...f	...f	...
31																									
MEAN*	3.8	3.8	3.8	3.7	3.6	3.2	3.2	5.5	6.9	7.7	8.2	8.2	8.2	8.5	8.9	9.2	8.7	8.2	6.6	4.7	4.0	3.9	3.8	3.9	5.8

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 140

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	275	p295a	315	315	290	260	240	245	240	270	280	280	275	280	255	250	235	210	225	250	...a	...a	...a	...
2	...a	...a	...a	...a	255	255	250	230	225	245	250	295	280	270	280	265	250	230	210	220	230	225	245	265	...
3	...a	...a	...a	250	220	240	230	230	255	245	230	260	270	275	280	260	230	220	205	245	230	270	250	240	...
4	240	260	260	235	200	245	230	235	230	245	240	255	270	290	250	250	250	230	230	220	220	235	240	245	242
5	255	250	265	260	235	220	235	205	220	240	245	260	260	300	290	265	240	230	205	210	230	250	240	230	243
6	245	230	250	230	220	220	180	235	230	250	255	245	260	280	280	260	245	230	210	p195c	240	235	270	275	240
7	300	...a	...a	...a	220	255	260	235	235	230	240	270	265	270	255	255	240	230	210	225	p270a	300	255	260	...
8	230	225	230	240	220	270	250	220	225	255	p265f	250	240	260	285	275	255	235	205	225	235	p250a	260	260	244
9	260	265	220	p215a	210	210	...c	...c	...c	245	250	275	290	290	285	260	250	240	220	200	210	240	260	270	...
10	260	270	230	225	220	260	280	230	260	255	240	245	270	280	...c	...c	...c	240	210	200	245	225	...a	...a	...
11	265	270	255	230	210	190	250	235	230	240	215	275	265	280	280	255	250	230	205	215	205	270	280	p260a	244
12	245	260	260	215	220	245	240	250	230	270	250	p250	260	285	275	255	230	230	220	220	275	270	290	260	250
13	265	260	270	230	p240	...c	...c	...c	...c	245	245	255	280	290	270	260	245	220	210	275	260	280	260	250	...
14	255	250	255	230	...c	...c	...c	...c	p235	255	250	260	290	285	280	280	250	225	...c	...c	...c	245	280	260	...
15	270	240	235	250	235	225	...c	...c	...c	225	240	270	270	305	275	265	240	225	205	235	270	300	270	265	...
16	300	270	250	250	225	220	210	210	230	240	265	270	280	275	260	250	240	230	205	215	260	260	265	255	247
17	230	225	220	235	240	260	235	225	230	240	245	255	270	270	280	250	240	215	215	240	250	260	265	270	248
18	290	245	285	280	250	260	210	230	245	235	265	245	250	265	275	265	235	220	245	235	p240	250	235	260	250
19	305	p255a	210	260	210	p230a	245	230	235	240	265	215	240	275	310	270	250	240	200	210	240	230	240	260	244
20	270	245	250	235	260	265	250	240	240	235	250	240	265	285	270	260	240	235	205	210	250	240	245	235	242
21	270	p255a	240	240	215	205	240	...c	...c	245	265	255	255	265	275	250	225	205	215	220	230	230	260	275	...
22	235	230	220	225	225	240	240	240	250	250	260	265	250	310	275	260	250	225	200	200	260	240	260	260	244
23	250	220	230	210	235	205	...c	...c	...c	210	265	245	250	275	260	260	240	220	200	220	260	240	240	250	...
24	240	230	255	225	220	240	250	230	230	270	260	245	245	270	270	265	245	215	240	250	255	245	225	270	245
25	300	280	280	270	285	300	325	p380a	430	390	405	p440a	480	390	380	345	300	255	245	270	275	p280a	285	290	328
26	...a	...a	280	260	320	p300a	285	250	235	295	250	280	330	295	285	245	240	205	210	220	230	245	250	270	...
27	280	...a	...a	245	220	210	250	230	p255c	215	...c	270	265	265	250	260	240	225	205	230	275	255	250	275	...
28	260	250	240	235	210	220	p260	...c	p240	265	255	260	270	280	260	210	215	225	225	240	240	260	p250	230	...
29	235	245	...c	...c	...c	...c	...c	...c	...c	...c	275	340	325	325	290	280	255	250	230	220	250	225	255	...a	...
30	250	...a	...a	285	245	215	220	p225c	230	250	265	260	275	295	295	250	225	230	205	220	255	250	260	260	...
31																									
MEAN*	261	250	249	244	235	240	245	238	244	250	258	268	276	286	279	261	244	228	214	224	246	252	256	259	250

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 141

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	3.6	4.2	4.5	4.7	4.5	4.7	4.6	4.3	3.9	...	...
2	...	...	...	4.2	4.5	4.8	4.7	4.7	4.7	4.5	4.0	...	...
3	...	...	4.0	4.3	4.4	4.3	4.7	4.7	4.7	...	...	...	...
4	...	...	...	4.2	4.4	4.6	4.8	4.5	4.3	4.2	...	...	...
5	...	...	...	4.0	4.3	4.4	4.6	5.0	...	4.5	...	...	...
6	...	...	...	4.0	4.5	4.4	4.2	4.7	4.6	4.4	3.9	...	...
7	...	...	...	4.2	4.4	4.8	4.8	4.5	...a	...	...	...	...
8	...	...	...	4.1	4.5	4.5	4.5	4.4	4.8	4.2	...	...	...
9	...	...	...	4.2	p4.3a	4.4	4.8	4.9	4.7	...a	...	...	...
10	...	...	4.0	4.3	4.4	4.3	4.8	4.7	...c	...c	...	...	...
11	...	...	...	4.2	p4.4	4.6	4.7	4.8	4.8	4.3	3.9	...	...
12	...	...	...	4.2	4.7	p4.8	4.5	4.8	4.9	3.8	...	...	...
13	...	...	...	4.3	p4.5a	4.7	4.8	4.8	4.4	...	...	...	...
14	...	...	p3.8	4.3	4.5	4.7	4.5	4.8	4.7	4.5	4.0	...	...
15	...	...	...	4.3	4.3	4.8	4.8	5.0	4.7	4.5	3.6	...	...
16	...	...	3.6	4.1	4.5	4.6	4.8	4.5	4.4	4.2	3.9	...	...
17	...	...	3.8	4.2	4.5	4.5	4.8	4.6	4.6	4.3	...	...	...
18	...	...	4.2	4.3	4.8	4.6	4.7	4.8	5.2	4.4	3.8	...	...
19	...	...	3.8	4.0	4.8	4.5	4.4	4.5	4.7	4.3	...	...	...
20	...	...	...	4.2	4.3	3.9	4.3	p4.5	4.7	4.2	...	...	...
21	...	...	...	4.3	4.3	4.3	4.5	4.3	4.1	4.0	...	...	...
22	...	...	3.9	4.3	4.6	4.7	4.1	5.2	4.3	4.1	3.6	...	...
23	...	...	...	...	4.4	4.5	4.5	4.6	4.2	4.2	...	...	...
24	...	...	...	4.2	4.5	4.6	4.3	4.7	3.6	4.1	3.6	...	...
25	...	...	3.5	3.8	4.0	p4.1a	4.2	4.2	4.1	4.0	3.4	...	...
26	...	...	...	4.0	4.3	4.3	4.4	4.3	4.3	4.2	3.5	...	...
27	...	...	...	...	...c	4.4	4.4	4.5	4.2	4.0	3.5	...	...
28	...	...	...	4.4	4.5	4.5	4.4	4.3	4.1	3.5	...	...	...
29	...	...	...	...c	4.2	4.3	4.3	4.4	4.3	4.0	...	...	...
30	...	...	...	3.8	4.2	4.4	4.2	4.2	4.4	4.0	...	...	...
31													
MEAN#	...	...	3.8	4.2	4.4	4.5	4.5	4.6	4.5	4.2	3.7	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	230	225	p220a	p210a	200	195	230	220	230	...	...
2	...	...	...	215	210	195	200	205	220	230	235	...	...
3	...	...	225	225	225	200	220	210	240	...	...	...	...
4	...	...	...	220	200	175	200	195	220	225	...	...	...
5	...	...	...	200	185	180	190	220	...	...	...	...	...
6	...	...	...	220	195	210	210	210	230	215	205	...	...
7	...	...	...	205	215	200	210	250	...a	...	...	...	...
8	...	...	...	225	210	...a	...a	215	220	245	...	...	...
9	...	...	...	220	p220a	215	195	245	250	...a	...	...	...
10	...	...	240	240	225	205	200	200	...c	...c	...	...	...
11	...	...	...	215	215	210	200	195	240	245	230	...	...
12	...	...	...	210	240	p215	200	200	230	215	...	...	...
13	...	...	...	220	p220a	220	220	220	230	...	...	...	...
14	...	...	p215	225	210	205	210	210	215	230	240	...	...
15	...	...	...	200	200	190	190	200	250	240	230	...	...
16	...	...	220	225	225	210	230	225	225	230	230	...	...
17	...	...	230	220	235	210	210	225	230	230	...	...	...
18	...	...	235	235	230	220	230	210	215	215	240	...	...
19	...	...	230	230	220	215	200	225	255	250	...	...	...
20	...	...	...	215	220	200	205	p225	245	225	...	...	...
21	...	...	...	225	200	195	200	200	220	235	...	...	...
22	...	...	235	225	230	205	190	230	240	230	230	...	...
23	...	...	...	...	215	210	225	225	225	225	...	...	...
24	...	...	...	230	195	230	190	215	200	225	230	...	...
25	...	...	245	245	230	p235a	240	230	250	230	240	...	...
26	...	...	...	230	220	200	200	195	230	250	230	...	...
27	...	...	...	...	...	200	230	220	215	230	225	...	...
28	...	...	...	220	230	200	220	220	225	220	...	...	...
29	...	...	...	...	220	215	205	245	215	220	...	...	...
30	...	...	...	220	185	190	205	200	200	240	...	...	...
31													
MEAN#	...	...	230	222	215	206	208	215	228	230	230	...	...

# = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 142

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1941 APRIL 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	...
2	...	0.6	0.7	0.7	0.8	0.8	1.0	1.0	0.8	0.8	0.7	0.6	...
3	...	0.7	0.7	0.7	0.9	0.7	0.7	0.8	0.7	0.7	0.6	0.7	...
4	...	0.7	0.7	0.9	1.3	0.9	0.8	1.0	0.9	0.8	0.7	0.7	...
5	...	0.7	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	...
6	...	...e	0.6	0.6	0.7	0.9	0.7	0.8	0.7	0.8	0.8	0.7	...
7	...	0.7	0.8	0.7	0.8	1.0	0.8	1.4	0.8	0.7	0.7	0.6	...
8	...	0.7	0.7	0.8	0.8	0.8	0.9	1.0	0.9	0.8	0.7	0.7	...
9	...	...c	...c	0.7	0.8	1.0	0.8	1.0	0.8	0.8	0.7	0.7	...
10	...	0.6	0.7	0.7	0.8	0.8	1.0	1.0	...c	...c	...c	...c	...
11	...	0.7	0.7	0.7	0.7	0.9	0.8	0.8	0.7	0.7	0.7	...e	...
12	...	0.7	0.7	0.7	0.8	p1.0	1.0	0.8	0.9	0.8	0.7	0.8	...
13	...	...c	...c	0.8	0.9	0.8	0.8	1.0	1.0	0.9	0.7	0.6	...
14	...	...c	p0.6	0.8	0.8	0.9	0.8	0.9	0.8	0.8	0.7	...c	...
15	...	...c	...c	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	...
16	...	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.7	...
17	...	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.7	...e	...
18	...	0.7	0.9	0.8	0.9	1.0	0.9	0.8	0.8	0.7	0.7	...e	...
19	...	0.7	0.6	0.6	0.8	1.0	0.8	0.8	0.9	0.7	0.8	0.8	...
20	...	0.7	0.7	0.7	0.7	1.0	0.9	1.0	1.0	0.8	0.6	0.6	...
21	...	...c	...c	0.7	0.7	1.0	0.8	0.8	0.8	0.7	0.8	0.7	...
22	...	0.6	0.7	0.7	0.9	1.0	1.0	1.0	0.9	0.8	0.7	0.8	...
23	...	...c	...c	0.7	0.8	0.7	0.7	0.8	0.7	0.6	0.7	...e	...
24	...	...e	0.6	0.7	0.8	0.8	0.8	0.7	0.8	0.7	0.7	...e	...
25	...	0.7	0.7	0.7	0.8	0.6	1.0	0.8	0.7	0.8	0.8	0.7	...
26	...	0.8	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.6	...e	...
27	...	...e	p0.7c	0.7	...c	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
28	...	...c	p0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...e	...e	...
29	...	...c	...c	...c	0.8	0.7	0.6	0.7	0.7	0.6	0.6	0.6	...
30	...	...e	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.7	...
31													
* MEAN	...	0.7	0.7	0.8	0.8	0.9	0.8	0.9	0.8	0.8	0.7	0.7	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.0	2.5	2.7	2.8	2.9	2.6	3.1	3.7	3.0	2.6	2.0	...
2	...	2.0	2.5	2.9	3.1	3.1	3.0	3.2	3.0	3.0	2.7	1.9	...
3	...	1.9	2.5	2.9	3.1	3.1	2.9	2.8	3.1	3.0	2.7	2.2	...
4	...	1.8	2.5	2.8	2.9	3.2	3.3	2.9	3.2	3.0	2.7	...	...
5	...	1.5	2.5	2.7	2.7	2.8	3.5	3.4	3.4	1.6	...	...	...
6	...	2.1	2.7	2.9	3.0	3.3	3.4	3.3	3.2	3.1	2.6	2.2	...
7	...	2.1	2.5	2.9	3.0	3.3	3.3	3.4	3.2	3.0	2.7	2.0	...
8	...	1.8	2.4	2.9	3.1	3.2	3.5	3.3	3.2	3.0	2.7	2.1	...
9	...	...	...	2.9	3.1	3.3	3.4	3.3	3.2	3.0	2.7	1.8	...
10	...	2.0	2.8	2.9	2.9	3.1	3.1	3.3	...c	...c	...c	...	...
11	...	2.0	2.4	3.0	3.3	3.3	3.3	3.0	3.3	3.1	2.7	2.0	...
12	...	1.8	2.0	2.9	3.1	p3.1	3.1	3.3	3.2	3.0	2.7	1.9	...
13	...	...c	...c	2.9	3.0	3.0	3.6	3.5	3.3	3.4	3.1	2.9	...
14	...	...	p2.6	2.8	3.0	3.3	3.2	3.3	3.0	p2.3	2.7	...	...
15	...	...c	...c	3.0	3.0	3.0	3.1	3.1	2.9	3.0	2.7	2.4	...
16	...	2.1	2.4	3.0	3.1	3.3	3.3	3.1	3.0	2.9	2.5	2.3	...
17	...	1.6	2.5	3.0	3.1	3.3	3.2	3.1	3.1	2.8	2.4	...	...
18	...	2.0	2.5	2.8	3.0	3.1	3.0	3.1	3.1	3.0	2.6	...	...
19	...	2.0	2.5	2.9	3.1	3.4	3.2	3.5	3.3	3.2	2.6	2.1	...
20	...	1.7	2.5	2.8	3.1	3.2	3.2	3.2	3.0	3.0	2.6	1.8	...
21	...	...c	...c	3.0	3.1	3.3	3.3	3.2	3.0	2.9	2.4	2.0	...
22	...	2.0	2.5	2.9	3.2	3.0	3.4	3.3	3.2	2.9	2.6	2.0	...
23	...	...c	...c	2.9	3.0	3.2	3.3	3.3	3.2	3.0	2.6	...	...
24	...	2.0	2.8	2.9	2.9	3.0	3.3	3.3	3.2	3.0	2.6	2.4	...
25	...	1.6	2.4	2.6	3.0	3.2	3.5	3.3	3.0	2.7	2.4	2.1	...
26	...	1.9	2.2	2.5	3.0	3.2	3.3	3.1	3.1	2.8	2.5	1.8	...
27	...	1.9	p2.6c	2.8	p3.0c	3.1	3.2	3.2	3.1	3.0	2.2	1.9	...
28	...	...c	p2.7	3.1	3.2	3.1	3.1	3.1	2.6	2.5	2.0	1.1	...
29	...	...c	...c	...c	3.0	3.1	3.1	3.0	3.1	2.8	2.4	1.4	...
30	...	...c	2.4	2.8	3.0	3.3	3.2	3.2	3.1	2.9	2.4	1.9	...
31													
* MEAN	...	1.9	2.5	2.9	3.0	3.2	3.2	3.2	3.1	2.9	2.6	2.0	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 143

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1941 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — MAY 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...f	...f	...f	...f	...f	...f	...f	4.2	...c	...c	7.1	7.4	6.9	6.6	7.0	7.8	7.2	7.2	4.8	2.3	2.2	2.5	2.7	2.8	...
2	3.0	3.0	3.3	3.2	3.6	3.3	p3.2f	4.9	6.1	6.8	7.9	8.4	8.0	8.4	9.0	9.8	8.4	6.4	4.7	3.3	2.8	3.3	3.3	4.1	5.3
3	4.3	4.2	4.7	4.2	3.9	3.1	2.7	4.9	5.6	6.6	8.0	8.2	7.6	8.0	8.9	8.5	7.4	6.5	4.8	3.4	3.2	3.6	3.6	4.1	5.4
4	...f	...f	...f	...c	...c	...c	...c	...c	...c	...c	8.2	8.0	6.7	6.9	7.7	7.7	8.2	7.7	5.5	3.9	3.3	...f	...f	2.8	...
5	3.1	3.4	3.3	3.3	...c	...c	...c	...c	...c	...c	8.0	8.6	8.4	7.3	...c	7.1	6.7	6.1	4.3	3.5	3.0	3.2	...c	...c	...
6	3.2	3.5	3.6	3.7	4.0	3.5	3.2	4.6	6.1	6.7	6.8	...c	...c	6.5	7.7	7.3	6.8	6.3	4.3	3.5	3.6	3.4	3.4	3.3	...
7	3.6	3.6	4.0	...f	...f	3.7	3.3	...c	...c	p6.7	7.9	8.5	6.8	8.1	9.5	9.2	8.2	6.2	3.8	2.7	2.7	2.9	3.5	3.6	...
8	3.9	3.9	4.0	3.7	3.7	3.3	3.1	4.7	6.3	6.6	p6.9	8.8	7.3	7.2	7.5	7.6	7.2	6.4	4.2	2.4	2.8	2.6	3.2	3.1	5.0
9	3.4	3.8	3.6	3.5	3.9	3.7	3.4	5.3	5.8	6.9	8.6	8.1	7.8	6.7	8.5	8.9	9.6	7.3	4.9	3.3	2.8	3.2	3.6	3.7	5.4
10	3.8	3.8	3.7	3.1	2.9	2.9	2.8	p4.1	6.6	6.7	7.7	7.6	7.6	7.3	8.2	7.9	6.9	6.5	6.0	4.1	3.2	3.1	3.5	3.7	5.2
11	4.3	3.8	4.0	4.7	4.1	3.7	3.5	5.2	p6.2	6.8	p7.5	8.6	p7.9c	7.2	8.2	7.8	7.0	5.6	4.7	3.3	3.3	3.4	4.0	3.9	5.4
12	4.2	4.5	4.3	4.1	4.2	4.1	3.7	4.9	6.0	6.5	6.7	7.8	6.9	7.0	7.0	6.8	7.0	6.3	4.5	3.1	3.1	3.5	3.3	3.4	5.1
13	3.8	4.0	4.1	4.2	4.2	3.9	4.2	4.8	p5.8	6.3	7.0	8.8	8.0	7.5	8.2	...c	...c	6.6	5.6	4.4	3.6	3.3	3.3	3.4	...
14	3.7	4.0	4.4	4.3	4.4	3.7	2.9	4.8	5.7	6.2	7.3	7.4	7.1	6.4	6.7	7.3	6.8	6.5	4.8	...a	...a	...a	...a	3.3	...
15	3.2	3.3	3.4	3.6	3.9	3.0	2.3	4.6	5.8	6.3	7.0	7.7	7.1	6.6	7.5	7.0	7.6	6.2	5.0	3.7	3.3	3.3	3.1	3.5	4.9
16	3.6	3.7	3.8	4.0	4.0	3.6	3.1	4.9	5.8	7.3	7.3	7.3	7.3	6.9	7.4	7.0	7.5	7.0	6.0	3.6	...a	2.8	2.8	3.3	...
17	3.5	3.3	3.5	3.8	3.6	2.6	2.4	4.8	6.3	7.4	7.3	7.1	7.6	7.4	7.5	9.0	9.2	8.8	6.2	3.1	2.9	2.1	2.6	2.9	5.2
18	3.0	3.3	3.3	3.4	3.2	2.7	2.5	4.7	6.9	7.0	6.7	6.9	7.5	7.5	9.0	7.6	8.2	6.3	4.9	4.2	2.8	2.6	2.5	3.0	5.0
19	3.2	3.1	3.2	3.3	3.5	3.0	2.5	4.6	6.5	6.9	7.5	7.1	7.3	8.2	8.1	8.2	7.6	7.0	5.2	3.5	3.0	2.4	2.7	2.9	5.0
20	3.3	3.5	3.8	3.8	3.9	3.5	3.0	4.7	6.2	6.5	7.2	7.5	8.0	7.4	7.4	7.9	7.4	6.5	4.4	3.5	3.3	2.7	2.9	2.9	5.0
21	3.2	3.2	3.2	3.6	3.6	3.5	3.0	4.8	5.6	6.6	7.0	6.9	7.2	7.1	7.6	7.7	6.9	6.4	6.0	4.6	3.0	p2.4	2.4	2.5	4.9
22	2.8	3.2	3.3	3.2	p3.2f	3.1	2.5	4.1	6.5	6.7	8.0	8.7	8.5	7.7	9.0	10.0	8.5	6.7	5.9	4.2	3.7	4.0	4.2	3.6	5.5
23	4.0	3.7	4.0	4.0	4.1	3.1	3.4	5.5	6.2	6.6	7.3	8.8	7.8	7.2	7.7	10.2	9.0	7.3	5.1	3.5	2.8	3.1	3.7	3.7	5.5
24	3.6	3.6	3.6	4.0	4.2	3.3	3.3	4.7	5.6	7.1	9.0	8.6	8.6	9.4	9.3	9.6	8.1	7.4	5.7	3.7	3.3	3.1	3.3	3.0	5.6
25	2.9	3.3	3.2	3.3	3.9	2.7	2.5	4.6	...c	7.5	8.3	8.5	7.0	7.2	8.3	9.2	8.4	6.2	4.7	3.5	3.2	3.2	...f	...f	...
26	...f	...f	...f	...f	3.9	3.2	2.7	4.3	6.0	6.5	8.0	7.3	8.0	7.8	...c	...c	7.3	6.7	5.0	2.8	...f	2.4	3.2	3.1	...
27	3.2	3.8	4.3	3.6	3.7	3.4	3.1	4.3	5.7	6.5	...c	...c	7.2	p7.3	7.7	7.3	7.6	7.0	4.6	2.7	p2.5	2.7	2.8	3.1	...
28	3.0	3.3	3.2	3.6	3.8	3.4	3.3	4.4	5.8	6.1	6.3	7.6	7.1	6.8	7.2	6.8	7.4	6.8	4.5	3.2	3.2	3.7	3.9	3.8	4.9
29	3.7	3.2	3.3	3.8	4.0	3.8	3.8	4.6	5.4	...c	...c	...c	...c	8.5	...c	7.5	7.2	7.0	4.9	3.5	2.5	3.2	p3.4	3.7	...
30	p3.7f	3.7	3.9	4.0	4.3	4.0	...c	...c	...c	p6.5	6.8	7.2	7.1	7.4	...c	p7.0	6.4	6.0	4.9	3.8	3.5	3.0	3.5	...f	...
31	...f	3.5	3.4	3.4	3.7	...f	3.0	4.4	5.9	6.8	7.5	6.5	6.4	8.0	8.8	7.3	7.5	5.7	4.6	3.5	3.4	3.5	3.6	3.2	...
MEAN*	3.5	3.6	3.7	3.7	3.8	3.4	3.0	4.7	6.0	6.7	7.5	7.8	7.5	7.4	8.0	8.0	7.6	6.7	5.0	3.5	3.1	3.0	3.3	3.3	5.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 144

MAY 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1941

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	260	...a	...a	230	...a	190	230	...c	...c	275	250	270	270	275	250	230	220	205	215	265	260	250	250	...
2	260	235	255	265	250	190	p260f	225	240	260	265	265	290	310	270	255	240	220	210	220	250	250	270	245	250
3	240	250	250	220	215	210	250	235	215	280	275	260	260	280	280	255	240	220	200	210	260	240	220	260	243
4	240	230	p220	...c	...c	...c	...c	...c	...c	...c	250	240	260	270	295	275	245	220	210	210	230	245	295	285	...
5	280	240	240	260	...c	...c	...c	...c	...c	...c	270	250	245	270	...c	255	230	215	200	225	220	245	...c	...c	...
6	270	255	230	245	225	220	200	220	230	235	260	...c	...c	265	280	240	235	220	205	240	240	250	250	250	...
7	275	240	240	265	265	260	255	...c	...c	p240	260	240	260	290	270	245	235	210	225	220	250	240	250	240	...
8	245	220	235	220	205	205	210	220	230	250	p270	260	250	270	260	240	240	215	200	235	255	250	240	245	236
9	240	225	215	220	215	240	245	230	230	250	260	245	275	240	285	265	230	205	210	210	250	245	265	230	238
10	230	230	220	230	220	250	225	p220	235	245	245	245	230	280	270	245	230	220	205	200	220	250	265	240	235
11	230	215	240	210	215	230	220	210	p225	240	p250	250	...c	250	250	240	225	200	200	230	220	250	240	225	...
12	240	230	210	210	220	210	200	215	230	245	240	255	245	275	245	230	230	205	195	200	245	250	230	250	229
13	260	250	230	235	230	200	220	215	p230	230	280	260	250	270	250	...c	...c	210	205	200	205	215	230	250	...
14	265	245	240	250	230	p215a	200	205	220	240	250	240	230	270	255	260	235	225	...a	...a	...a	...c	...c	250	...
15	...a	250	240	260	225	200	250	215	225	240	270	255	240	300	250	255	230	215	220	210	225	220	245	255	...
16	275	260	...a	...a	240	230	200	215	220	245	255	250	240	270	270	255	230	215	220	240	...a	...a	285	280	...
17	260	270	275	240	235	250	225	215	225	240	230	220	280	275	270	275	250	210	200	245	230	340	300	300	252
18	290	265	260	240	235	245	235	230	230	220	245	255	270	290	255	240	240	210	215	210	215	235	255	260	244
19	265	260	270	260	230	200	230	210	230	245	250	245	265	260	250	250	235	220	210	220	210	235	240	275	240
20	260	275	255	250	225	215	210	200	220	240	250	260	270	240	270	255	230	210	215	230	210	255	255	260	240
21	280	250	230	235	240	220	215	210	215	230	260	240	265	280	280	250	230	215	220	205	200	260	235	290	240
22	285	260	270	280	255	200	220	205	230	235	265	260	235	220	265	255	220	210	220	220	230	250	220	280	241
23	225	240	220	230	220	180	230	220	220	220	240	260	260	255	270	255	230	210	205	225	240	270	240	210	232
24	250	255	255	235	225	210	225	205	225	255	270	245	270	270	270	250	230	220	205	220	240	250	275	240	241
25	280	245	215	255	225	225	230	215	...c	250	255	250	255	265	265	250	225	210	210	230	245	255	250	260	...
26	270	270	240	260	235	215	210	220	230	240	240	210	250	260	...c	...c	245	210	220	220	...a	260	240	230	...
27	280	250	210	230	220	220	230	210	220	240	...c	...c	230	p270	255	240	220	210	210	230	p230	230	240	245	...
28	250	270	255	255	240	220	240	230	215	...c	...c	250	225	295	250	245	235	215	220	210	235	235	240	210	...
29	215	230	230	240	230	230	210	210	215	...c	...c	...c	...c	255	...c	230	225	220	215	230	240	230	p245	250	...
30	235	245	240	235	215	210	...c	...c	...c	p235	265	250	265	260	...c	p225	245	220	200	215	215	230	255	250	...
31	250	235	220	245	235	230	210	220	230	235	225	250	265	250	260	250	230	200	250	240	235	230	215	220	235
* MEAN	257	247	238	242	229	219	223	217	225	242	256	249	255	269	265	249	233	214	204	220	232	247	250	251	239

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 145

MAY 1941 — MAY 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION													MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.4	4.5	4.5	4.4	4.4	3.5	...	...	...	...	...	...	...	200	205	225	205	220	200	...	...	...
2	...	...	...	4.1	4.5	4.4	4.4	4.8	4.3	4.0	3.4	...	...	...	...	...	230	230	210	200	200	240	220	235	...	...
3	...	...	...	4.0	4.3	4.5	4.5	4.5	4.4	4.2	...	...	...	...	...	...	225	205	220	185	200	200	230	...	...	...
4	...	...	...	...c	4.2	4.4	4.3	4.4	4.2	4.2	3.6	...	...	...	...	...	...c	220	230	210	215	205	240	225	...	...
5	...	...	...	...c	4.3	4.4	4.3	4.3	4.2	4.0	...	...	...	...	...	...	...c	210	240	220	200	225	225	...	...	...
6	...	...	...	4.0	4.1	...c	...c	4.3	4.5	4.0	...	...	...	...	...	...	225	205	...c	...c	200	195	225	...	...	...
7	...	...	...	...	4.3	4.5	4.4	4.2	4.3	4.1	...	...	...	...	...	...	...	240	220	205	200	210	230	...	...	...
8	...	...	...	4.2	p4.2	4.3	4.4	4.4	4.2	3.3	...	...	...	...	...	...	235	p195	190	220	200	205	200	...	...	...
9	...	...	...	4.0	4.3	4.2	4.7	4.4	p4.0a	3.6	3.5	...	...	...	...	...	225	230	200	215	225	p220a	215	230	...	...
10	...	...	...	4.0	4.3	4.3	4.4	4.4	4.1	3.9	...	...	...	...	...	...	230	230	235	225	210	250	230	...	...	...
11	...	...	...	4.0	p4.2	4.3	...c	4.3	4.1	4.0	...	...	...	...	...	...	230	p215	225	...c	220	215	215	...	...	...
12	...	...	...	4.0	4.2	4.3	4.3	4.5	4.2	4.0	3.4	...	...	...	...	...	230	215	215	220	220	220	220	215	...	...
13	...	...	...	...	4.1	4.5	4.2	4.3	4.2	...	...	...	...	...	...	...	...	215	200	235	235	230	...	...	...	...
14	...	...	...	4.0	4.3	4.3	4.3	4.4	4.3	3.9	...	...	...	...	...	...	200	240	220	200	215	210	190	...	...	...
15	...	...	...	4.0	4.3	4.4	4.5	4.7	4.2	3.8	...	...	...	...	...	...	230	240	230	p215a	200	225	225	...	...	...
16	...	...	...	...	4.3	4.4	4.4	4.3	4.3	4.0	3.3	...	...	...	...	...	225	220	205	225	195	210	220	...	...	...
17	...	...	...	4.1	4.2	4.3	4.5	4.4	4.3	4.1	...	...	...	...	...	...	210	220	200	195	200	230	230	...	...	...
18	...	...	...	3.8	4.1	4.3	4.3	4.3	4.2	4.0	...	...	...	...	...	...	230	220	220	220	230	220	210	...	...	...
19	...	...	...	4.0	4.3	4.4	4.3	4.8	4.3	3.8	...	...	...	...	...	...	225	235	230	200	215	220	220	...	...	...
20	...	...	...	4.0	4.2	4.3	4.6	4.4	4.3	4.0	...	...	...	...	...	...	205	225	215	240	205	205	210	...	...	...
21	...	...	2.9	4.0	4.4	4.3	4.5	4.5	4.5	4.0	...	...	...	...	...	200	225	220	220	245	220	225	230	...	...	...
22	...	...	...	...	4.5	4.1	...	...	...	4.0	3.2	...	...	...	...	...	...	220	200	...	...	...	245	235	...	...
23	...	...	...	...	...	4.5	4.5	4.3	4.3	4.0	...	...	...	...	...	...	...	...	240	240	230	200	195	...	...	...
24	...	...	...	4.0	4.3	4.3	4.4	4.4	4.4	4.0	...	...	...	...	...	...	215	195	215	210	210	190	220	...	...	...
25	...	...	...	4.1	4.3	4.3	...a	...a	4.3	...a	...a	...	...	...	...	...	245	230	...a	...a	...	235	...a	...a	...	...
26	...	...	2.8	3.6	4.1	3.6	4.2	4.4	...c	...c	3.3	...	...	...	...	190	180	210	180	180	220	...c	...c	220	...	...
27	...	...	...	3.9	...c	...c	4.3	4.4	4.1	3.9	...	...	...	...	...	...	230	...c	...c	220	200	230	210	...	...	...
28	...	...	...	...c	4.0	4.2	4.3	3.9	4.0	4.0	...	...	...	...	...	...	...c	...c	220	220	205	230	220	...	...	...
29	...	...	...	...c	...c	...c	...c	4.4	...c	...	...	...	...	...	...	...	...c	...c	...c	...c	230	...c	...	...	...	...
30	...	...	...	...	3.7	4.1	3.9	3.5	...	...	...	...	...	...	...	...	...	195	215	180	180	...	...	...	...	...
31	...	...	3.1	3.4	4.0	4.0	4.1	4.3	4.1	3.8	...	...	...	...	...	220	210	230	200	175	230	220	230	...	...	...
* MEAN	...	...	2.9	4.0	4.2	4.3	4.4	4.4	4.2	3.9	3.4	...	...	...	...	203	222	219	215	212	211	218	219	227	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 146

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	...c	...c	0.8	0.8	0.9	0.8	0.8	0.7	0.6	...e	...
2	...	0.7	0.6	0.7	0.8	1.0	0.6	0.6	0.6	0.6	0.6	0.8	...
3	...	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.8	...e	...
4	...	...c	...c	...c	0.8	0.9	0.9	1.1	1.0	1.0	0.7	0.8	...
5	...	...c	...c	...c	p0.8	0.8	0.7	0.9	0.8	0.7	0.7	0.6	...
6	...	0.6	0.6	0.7	0.7	...c	...c	0.8	0.7	0.7	0.7	0.8	...
7	...	...c	...c	0.7	0.8	0.8	0.8	0.8	0.6	0.7	0.6	...e	...
8	...	...e	0.6	0.9	p0.8	0.9	0.8	0.8	0.9	0.9	0.7	0.6	...
9	...	...e	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.6	...
10	...	...e	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.8	...
11	...	0.7	0.7	0.7	p0.7	0.8	...c	0.8	0.7	0.7	0.7	...e	...
12	...	...e	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.6	0.7	0.7	...
13	...	...e	p0.6	0.7	0.7	0.7	0.8	0.8	0.7	...c	...c	...e	...
14	...	...e	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.7	0.6	...e	...
15	...	...e	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	...e	...
16	...	...e	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.5	0.7	...
17	...	0.7	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.6	0.6	...e	...
18	...	...e	...e	0.6	0.6	0.8	0.7	0.8	0.7	0.7	0.7	0.6	...
19	...	...e	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.7	...
20	...	0.7	0.6	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.6	...e	...
21	...	...e	0.6	0.6	0.7	0.6	0.6	0.6	0.8	0.6	0.7	0.7	...
22	...	...e	0.6	0.5	0.7	0.9	1.0	0.8	0.7	0.6	0.6	0.6	...
23	...	...e	0.6	0.5	0.7	0.7	0.6	0.7	0.7	0.7	0.6	...e	...
24	...	...e	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.6	...
25	...	0.6	...c	0.9	0.7	0.7	1.0	0.7	0.7	0.7	0.6	0.7	...
26	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	...c	...c	0.7	0.8	...
27	...	...e	0.6	0.7	...c	...c	0.8	0.7	0.7	0.7	0.7	...e	...
28	...	...e	0.7	0.8	1.0	0.9	1.0	0.7	0.8	0.8	0.7	0.7	...
29	...	...e	0.7	...c	...c	...c	...c	0.8	...c	0.7	0.7	0.7	...
30	...	...c	...c	...c	0.8	0.8	0.7	0.7	...c	p0.6	0.7	0.8	...
31	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...
MEAN*	...	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.1	...c	...c	3.0	3.1	3.1	3.2	3.2	2.9	2.5	...	...
2	...	1.9	2.5	2.8	3.0	3.0	3.2	3.2	3.2	2.8	2.5	1.7	...
3	...	1.9	2.2	2.7	3.0	3.2	3.2	3.1	3.1	2.5	2.3	...	...
4	...	...c	...c	...c	3.0	3.0	3.0	3.0	2.9	2.6	2.4	1.7	...
5	...	...c	...c	...c	3.0	3.1	3.2	3.0	3.0	2.8	2.4	1.9	...
6	...	1.9	2.5	2.7	2.9	...c	...c	3.1	3.0	2.9	2.4	1.9	...
7	...	...c	...c	2.9	3.0	3.1	3.1	3.2	3.0	2.7	2.3	...	...
8	...	1.9	2.3	2.8	p2.8	3.2	3.3	3.2	3.0	2.9	2.5	1.8	...
9	...	2.0	2.6	2.8	3.0	3.2	3.0	3.1	3.1	2.8	2.5	1.8	...
10	...	1.6	2.1	3.2	3.2	3.1	3.2	3.1	2.9	3.1	2.5	1.7	...
11	...	1.8	2.5	3.0	p3.1	3.1	...c	3.2	3.0	2.8	2.5	1.8	...
12	...	2.0	2.7	3.0	3.2	3.0	3.0	3.0	2.8	2.9	2.4	1.9	...
13	...	1.8	2.5	2.7	2.9	3.1	3.1	3.3	3.2	...c	...c	1.8	...
14	...	1.8	2.2	2.6	2.9	3.2	3.0	3.2	3.0	2.8	2.4	1.8	...
15	...	1.9	2.5	2.7	2.7	3.2	3.2	3.2	3.0	2.8	2.8	1.9	...
16	...	1.8	2.2	2.5	2.6	3.3	3.2	3.2	3.0	2.7	2.4	1.8	...
17	...	1.7	2.4	2.7	2.9	3.2	3.0	3.1	3.2	2.8	2.4	1.5	...
18	...	1.7	2.5	2.7	3.0	3.1	3.1	3.0	3.0	2.8	2.5	1.8	...
19	...	1.9	2.6	2.7	3.0	3.2	3.2	3.2	3.0	2.7	2.5	1.8	...
20	...	1.8	2.6	2.7	3.0	3.2	3.2	3.1	2.8	2.8	2.5	1.7	...
21	...	1.7	2.4	2.7	3.0	3.1	3.2	3.2	3.1	2.8	2.4	1.7	...
22	...	1.8	2.6	3.2	3.2	3.1	3.2	3.1	3.0	2.7	2.4	1.5	...
23	...	1.8	2.1	2.6	2.9	3.1	3.2	3.0	2.8	2.5	2.4	...	...
24	...	1.3	2.2	2.6	2.9	3.1	3.1	3.1	2.7	2.7	2.4	1.6	...
25	...	1.8	...c	2.5	3.0	3.0	3.0	2.5	3.1	...a	...a	1.8	...
26	...	1.8	2.1	2.5	2.8	3.0	3.0	3.1	...c	...c	2.4	1.5	...
27	...	1.7	2.1	2.6	...c	...c	3.0	3.0	2.9	3.0	2.4	1.4	...
28	...	1.5	2.1	3.2	3.0	3.1	3.0	3.0	3.0	2.9	2.1	1.4	...
29	...	1.6	2.6	...c	...c	...c	...c	3.0	...c	3.0	2.3	1.7	...
30	...	...c	...c	p2.4	2.8	2.8	2.9	2.8	...c	p2.0	2.4	1.7	...
31	...	1.5	2.2	2.5	3.0	3.1	3.0	3.0	3.0	2.7	2.3	1.4	...
MEAN*	...	1.8	2.4	2.7	3.0	3.1	3.1	3.1	3.0	2.8	2.4	1.7	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 147

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1941 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JUNE 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	3.4	3.3	3.8	4.0	3.7	2.4	4.0	5.6	6.8	7.5	6.7	7.1	7.0	7.6	8.3	7.2	6.6	4.5	2.5	2.8	3.0	3.0	3.2	4.9
2	3.3	3.5	3.8	4.0	3.9	3.4	3.2	4.2	5.7	5.8	6.6	7.2	7.4	6.9	6.6	7.2	6.6	6.0	4.6	3.2	3.4	3.4	3.4	3.2	4.8
3	3.5	3.6	4.0	4.0	4.4	4.0	3.3	4.3	5.3	p5.8	6.4	6.7	6.7	6.1	6.6	6.8	5.4	5.5	3.6	3.3	3.3	3.0	3.4	3.3	4.7
4	3.0	3.1	3.4	3.7	3.6	3.3	...f	3.9	5.3	6.2	6.2	7.1	p6.3	6.5	6.3	6.2	6.3	5.4	4.7	2.6	2.9	3.3	3.7	3.7	...
5	3.3	3.7	3.9	4.0	4.3	4.5	3.7	4.3	4.8	5.5	7.0	p6.6c	6.3	6.6	6.6	7.7	7.8	6.3	4.6	p3.3	3.6	3.6	4.2	4.2	5.0
6	4.8	5.2	5.2	5.3	5.6	5.3	5.2	4.9	...c	5.5	7.1	7.3	6.9	6.1	6.5	7.2	7.4	5.7	3.9	3.2	3.4	p4.1	3.8	4.1	...
7	4.1	4.8	5.0	4.7	4.8	5.2	5.0	5.0	...c	...c	...c	...c	...c	...c	...c	7.2	p6.9	5.3	4.3	3.3	3.3	3.4	3.5	3.9	...
8	4.0	3.9	3.9	4.1	4.3	3.5	2.6	3.6	5.7	6.2	7.2	6.4	6.2	6.0	6.7	6.7	6.9	5.4	4.1	3.5	2.9	2.8	3.4	3.4	4.7
9	3.0	3.5	3.7	4.0	4.3	4.1	3.5	4.2	5.5	6.3	6.7	6.5	p6.1	6.0	p6.7	7.3	5.6	5.3	4.1	3.1	3.5	4.0	4.4	4.5	4.8
10	4.3	4.7	5.2	5.0	5.2	4.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.7	7.3	7.1	4.5	3.2	3.5	4.1	4.2	...
11	4.3	4.8	5.0	5.8	p2.8	5.2	2.4	3.6	5.7	7.5	...c	7.3	7.1	8.2	7.5	7.7	7.4	5.6	5.2	3.4	3.5	2.8	3.0	2.9	...
12	2.8	3.6	3.6	3.8	4.4	3.8	3.2	4.4	6.0	6.3	7.0	7.1	7.2	7.2	7.4	8.6	7.2	6.4	4.7	3.8	3.1	3.2	3.8	3.9	5.1
13	4.0	4.0	4.4	4.6	4.6	4.3	4.2	4.7	6.0	6.4	7.2	6.9	7.4	6.5	6.6	7.0	7.7	7.3	6.4	5.0	5.0	2.6	...f	...f	...
14	...f	3.3	...f	4.2	4.4	3.9	3.1	4.4	5.2	6.2	7.4	6.5	9.0	8.1	8.5	7.4	6.5	6.4	6.1	3.9	4.1	3.1	3.1	3.4	...
15	2.9	3.0	3.3	3.1	3.7	3.4	2.5	3.8	5.5	6.2	6.7	7.5	7.8	8.0	8.3	9.0	9.0	6.9	6.0	5.0	...f	...f	...f	...f	...
16	...f	...f	...f	3.6	3.9	3.5	4.0	4.5	5.9	7.1	6.8	7.3	7.6	7.0	8.0	7.0	7.6	7.0	5.0	2.5	2.7	2.7	3.0	2.7	...
17	2.9	3.1	3.1	3.2	3.5	3.6	2.7	...c	...c	...c	7.1	6.5	6.4	7.4	7.7	6.6	6.0	6.0	4.5	3.7	2.7	3.0	3.0	3.0	...
18	3.2	3.2	3.6	3.7	4.0	3.6	2.5	4.0	6.5	6.2	8.0	7.8	7.7	9.8	8.0	8.4	8.5	5.9	5.3	3.8	3.9	...f	4.1	p3.5	...
19	3.2	3.4	3.9	4.0	4.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.2	6.8	p6.1	3.9	3.3	3.4	3.3	3.6	...f	...
20	3.9	3.5	...f	...f	3.5	3.6	3.3	4.0	6.5	6.6	7.5	7.7	7.2	7.3	6.6	6.8	7.9	7.3	6.1	3.2	...f	3.0	3.2	3.1	...
21	3.1	3.9	4.5	3.3	3.3	3.6	3.5	4.5	p5.3	7.2	8.0	8.3	6.8	7.5	6.8	7.0	7.5	7.2	5.3	3.0	2.4	2.8	3.0	2.9	5.0
22	3.0	3.1	3.0	2.9	3.2	2.9	2.4	4.0	5.5	6.4	p6.5	...c	...c	p6.0	6.5	7.5	6.7	5.8	4.1	2.9	2.4	2.7	2.6	2.6	...
23	2.5	2.9	3.0	3.4	3.2	2.5	2.7	3.7	5.2	p6.0	7.3	6.8	7.3	...c	7.2	6.9	7.0	5.4	4.5	3.3	2.5	2.9	3.0	2.7	...
24	2.9	3.6	3.5	3.6	3.9	4.1	3.3	3.9	5.8	6.0	6.6	6.6	6.8	6.4	6.9	7.0	6.7	6.5	3.6	3.5	3.1	3.4	3.1	3.4	4.8
25	3.4	3.2	3.3	3.3	3.5	3.6	3.8	4.2	...c	6.0	7.5	5.6	6.5	7.5	7.4	7.3	6.6	6.5	3.9	3.6	3.2	3.0	2.7	3.0	...
26	3.5	3.5	4.0	4.0	3.4	3.0	2.6	3.8	5.5	5.7	7.0	7.1	6.8	7.0	8.0	7.6	7.4	7.5	5.5	...f	2.9	3.8	4.1	4.0	...
27	4.1	4.8	4.6	4.6	4.5	4.1	3.2	4.3	p5.8	6.3	6.7	7.5	...c	8.0	p7.3	p7.7	7.7	7.2	5.2	3.2	3.3	3.1	3.4	3.5	...
28	3.5	3.9	4.0	4.2	4.3	3.7	3.6	4.2	7.0	6.7	5.9	6.1	7.0	7.7	6.7	8.0	6.7	5.8	4.3	3.2	3.2	3.9	4.0	3.7	5.0
29	3.6	3.4	3.9	4.0	4.7	2.8	2.8	4.3	5.7	6.3	7.8	7.0	7.1	7.9	7.9	7.4	6.8	5.6	5.0	3.6	3.3	3.2	3.4	3.7	5.0
30	3.7	3.8	4.0	3.9	3.7	3.2	3.0	4.5	5.9	6.5	6.8	6.5	6.9	6.7	8.0	8.3	6.1	7.4	4.3	4.1	4.3	4.1	4.1	4.0	5.2
31																									
*MEAN	3.5	3.7	3.9	4.0	4.0	3.8	3.2	4.2	5.7	6.3	7.0	6.9	7.0	7.1	7.2	7.4	7.0	6.3	4.8	3.5	3.3	3.2	3.5	3.5	5.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 148

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	235	230	225	230	195	220	220	220	245	245	255	245	235	275	270	235	210	200	240	215	220	255	230	234
2	210	240	235	230	210	220	210	215	220	220	250	260	240	260	260	230	220	220	185	220	220	235	230	240	228
3	220	240	225	235	220	215	210	205	215	p230	240	260	235	245	270	240	210	210	230	220	220	235	230	210	228
4	230	255	255	245	250	215	230	205	225	235	240	245	p250	240	265	245	240	205	195	210	240	235	240	215	234
5	230	235	260	240	235	200	200	200	210	220	250	...c	250	280	240	275	230	205	210	p200	200	240	200	245	...
6	240	235	220	230	240	210	210	215	...c	225	250	230	280	260	255	265	230	240	200	250	240	p210	230	210	...
7	240	240	210	210	230	235	210	220	...c	...c	...c	...c	...c	...c	...c	240	p245	210	205	250	220	220	240	260	...
8	230	240	250	240	225	205	230	230	235	245	235	250	255	330	280	260	235	220	210	220	220	230	240	235	240
9	250	230	220	240	235	200	205	205	215	240	250	235	p265	250	p255	240	215	210	215	190	225	230	215	230	228
10	245	230	220	230	210	210	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	235	235	215	215	235	245	255	300	...
11	300	280	230	230	p230	255	250	255	215	240	...c	255	275	265	255	275	235	230	220	240	210	250	275	275	...
12	250	265	235	250	225	220	215	230	230	245	275	240	260	270	270	250	235	215	200	220	220	240	245	235	239
13	270	270	245	230	230	220	215	...a	220	230	245	245	260	260	230	245	235	230	220	230	195	230	280	275	...
14	265	310	300	...a	265	...a	265	230	230	235	265	265	265	270	230	225	225	230	230	245	220	235	290	265	...
15	285	265	260	250	250	210	190	230	225	250	245	240	265	270	250	270	240	215	220	215	...a	275	270	245	...
16	245	...a	...a	260	235	240	225	205	225	260	245	240	250	250	230	245	240	215	205	200	240	235	210	265	...
17	255	235	230	220	230	215	200	...c	...c	...c	235	255	250	235	250	240	235	210	220	240	240	250	220	230	...
18	230	250	240	240	220	240	270	210	230	235	250	250	280	265	250	240	225	210	215	210	230	230	220	p220	236
19	290	260	245	230	235	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	230	230	p210	185	230	215	245	210	230	...
20	215	255	230	250	255	220	250	240	215	235	240	240	270	240	240	265	240	240	235	235	245	230	230	260	241
21	250	250	210	200	260	250	230	230	p215	240	245	230	285	265	240	250	230	230	200	220	220	255	245	260	238
22	270	225	230	240	240	215	235	230	220	220	p220	...c	...c	p245x	235	240	230	220	200	220	225	215	270	230	...
23	250	265	275	230	220	200	210	215	205	p210	235	235	265	...c	270	240	230	210	205	205	210	235	220	220	...
24	265	250	235	255	240	210	190	230	225	235	250	250	255	255	250	270	240	235	205	215	210	220	215	235	235
25	235	235	245	250	240	230	210	225	...c	230	260	230	300	260	250	250	240	220	200	215	220	210	200	250	...
26	280	240	240	220	210	220	235	200	235	230	260	240	260	285	265	250	230	235	200	...a	230	235	230	250	...
27	245	240	230	235	210	215	200	235	p225	230	240	255	...c	260	p255	p265	240	230	200	220	220	225	235	270	...
28	240	220	230	250	220	230	200	235	220	230	215	255	260	270	255	230	230	210	205	210	250	240	255	235	233
29	215	230	240	240	230	280	240	235	230	225	255	230	315	260	255	250	235	220	200	210	235	225	235	235	239
30	240	220	240	250	240	190	245	235	225	250	255	250	250	300	270	250	230	220	195	230	215	230	220	230	237
31																									
MEAN*	249	246	238	236	232	220	221	223	222	234	246	246	263	273	254	250	232	220	208	222	224	234	237	243	236

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 149

JUNE 1941 | JUNE 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.0	4.1	4.2	4.2	4.2	4.4	4.1	...	...	...
2	...	...	...	3.1	4.1	4.2	4.3	4.3	4.1	3.8	...	...	...
3	...	...	...	...	4.0	p4.1a	4.2	4.2	4.3	3.9	...	...	...
4	...	...	...	...	4.1	4.3	p4.3	4.2	p4.1	3.9	...	...	...
5	...	...	...	...	4.0	...c	4.3	4.7	4.2	3.8	...	...	...
6	...	...	...	...	4.0	4.3	4.4	4.4	4.1	3.9	...	...	...
7	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
8	...	...	...	3.9	4.1	4.2	4.3	5.0	4.2	4.0	...	...	...
9	...	...	2.7	3.6	4.0	4.3	4.2	4.1	4.2	3.8	...	...	...
10	...	...	...	...c	...c	...c	...c	...c	...c	...c	3.3	...	...
11	...	...	...	3.7	...c	4.3	4.1	4.0	4.1	...a	...	...	...
12	...	...	...	3.3	4.4	4.3	4.4	4.4	3.9	3.8	...	...	...
13	...	...	...	3.7	4.2	4.3	4.3	4.3	4.0	...	...	...	...
14	...	...	...	3.2	4.3	4.2	4.2	4.4	4.3	3.6	...	...	...
15	...	...	2.7	3.8	4.3	4.3	4.4	4.3	4.3	...	...	...	...
16	...	...	...	4.1	4.2	4.3	4.2	4.0	4.1	...a	...	...	...
17	...	...	...	...	4.0	4.3	4.3	4.3	4.1	3.7	...	...	...
18	...	...	...	3.7	4.2	4.5	4.4	4.4	4.1	3.9	...	...	...
19	...	...	...	...a	...c	...c	...c	...c	...c	3.4	...	...	...
20	...	...	...	...	4.0	4.3	4.3	4.3	4.0	3.7	...	...	...
21	...	...	...	3.9	4.2	4.3	5.0	4.2	3.7	3.7	...	...	...
22	...	...	...	3.4	p4.2	...c	...c	p4.3	3.4	3.8	...	...	...
23	...	...	...	3.7	4.3	4.1	4.3	...c	4.2	3.7	...	...	...
24	...	...	...	...	4.2	4.2	4.3	4.8	4.1	4.0	...	...	...
25	...	...	...	3.6	4.2	4.2	5.1	4.1	4.0	3.5	...	...	...
26	...	...	...	3.3	4.3	4.3	4.3	4.5	4.3	3.7	...	...	...
27	...	...	...	3.7	4.0	4.3	4.5	4.5	4.2	3.7	...	...	...
28	...	...	...	3.6	3.8	4.1	4.4	4.1	4.2	3.7	...	...	...
29	...	...	...	...	4.3	4.4	4.7	4.3	4.2	4.0	...	...	...
30	...	...	...	2.9	4.1	4.3	4.5	5.0	4.0	3.9	...	...	...
31													
MEAN*	...	...	2.7	3.6	4.1	4.3	4.4	4.4	4.1	3.8	3.3	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	230	200	220	230	220	230	...	...	...
2	...	...	...	185	180	225	245	220	205	230	...	...	...
3	...	...	...	...	250	...a	240	215	200	220	...	...	...
4	...	...	...	...	230	235	p215	...a	...a	215	...	...	...
5	...	...	...	...	185	...c	210	220	200	240	...	...	...
6	...	...	...	...	230	...a	220	200	195	225	...	...	...
7	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
8	...	...	...	225	240	230	205	225	205	225	...	...	...
9	...	...	210	210	200	225	200	195	200	235	...	...	...
10	...	...	...	...c	...c	...c	...c	...c	...c	...c	225	...	...
11	...	...	...	220	...c	220	200	...a	220	...a	...	...	...
12	...	...	...	210	200	200	210	200	180	225	...	...	...
13	...	...	...	210	210	190	200	200	200	...	...	...	...
14	...	...	...	210	200	230	200	205	...a	215	...	...	...
15	...	...	230	200	250	225	230	230	250	...	...	...	...
16	...	...	...	250	230	205	200	200	230	...a	...	...	...
17	...	...	...	...	200	180	200	225	220	195	...	...	...
18	...	...	...	210	240	190	180	245	225	220	...	...	...
19	...	...	...	...c	...c	...c	...c	...c	...c	220	...	...	...
20	...	...	...	...	215	225	...a	225	205	...a	...	...	...
21	...	...	...	220	225	220	200	220	215	200	...	...	...
22	...	...	...	200	p225	...c	...c	p200	160	220	...	...	...
23	...	...	...	220	245	190	185	...c	215	220	...	...	...
24	...	...	...	...	230	190	230	200	220	220	...	...	...
25	...	...	...	215	180	200	195	230	200	200	...	...	...
26	...	...	...	190	230	230	200	215	240	220	...	...	...
27	...	...	...	195	205	185	200	200	220	225	...	...	...
28	...	...	...	205	200	200	190	270	220	210	...	...	...
29	...	...	...	...	250	220	210	200	220	220	...	...	...
30	...	...	...	230	220	220	200	225	210	225	...	...	...
31													
MEAN*	...	...	220	212	219	210	207	216	211	220	225	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 150

JUNE 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.5	...e	...
2	...	...e	0.6	0.6	0.7	0.7	1.0	0.8	0.7	0.7	0.7	...e	...
3	...	...e	0.7	p0.8	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.8	...
4	...	...e	0.7	0.6	0.7	0.8	p0.8	0.7	0.8	0.7	...e	...e	...
5	...	...e	0.7	0.6	0.8	...c	1.0	0.9	0.9	1.0	0.7	...e	...
6	...	...e	...c	0.7	0.7	0.7	0.8	0.8	0.7	0.7	...e	...	...
7	...	...e	...c	...c	...c	...c	...c	...c	...c	0.7	p0.6	...e	...
8	...	...e	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.6	0.9	...
9	...	0.7	0.7	0.7	0.8	0.8	0.8	1.0	0.9	0.6	0.6	0.7	...
10	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	0.6	...e	...
11	...	0.6	0.7	0.7	...c	0.8	0.7	0.8	0.8	0.7	0.7	0.6	...
12	...	...e	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...e	...e	...
13	...	0.8	1.0	1.0	0.9	0.8	1.0	1.0	0.9	0.7	0.6	...e	...
14	...	...e	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.7	...e	...
15	...	...e	0.5	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.6	...
16	...	...e	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	...e	...e	...
17	...	...c	...c	...c	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	...
18	...	...e	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.7	...e	...e	...
19	...	...c	...c	...c	...c	...c	...c	...c	...c	0.7	0.7	...e	...
20	...	...e	0.5	0.6	0.7	0.6	0.6	0.6	0.5	0.6	0.7	0.7	...
21	...	...e	p0.7	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.6	...
22	...	...e	0.7	0.7	p0.8	...c	...c	0.7	0.6	0.7	0.7	0.7	...
23	...	...e	0.8	0.7	0.8	0.8	0.8	...c	0.7	0.7	0.7	0.8	...
24	...	...e	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.7	...
25	...	...e	...c	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.7	...
26	...	...e	0.6	0.7	0.8	0.9	0.8	1.0	0.7	0.8	0.7	0.6	...
27	...	0.7	0.8	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	...
28	...	...e	0.7	0.8	0.8	1.0	0.8	0.8	0.8	0.7	0.7	0.7	...
29	...	...e	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.7	...
30	...	...e	1.0	0.7	1.0	0.8	1.0	0.8	0.7	0.8	0.7	0.7	...
31													
MEAN*	...	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.7	2.7	3.1	2.9	3.0	3.0	3.0	3.1	2.8	2.6	1.6	...
2	...	1.3	2.2	2.6	2.8	3.0	3.0	3.2	2.9	2.8	2.4	1.6	...
3	...	1.8	2.7	p2.7	2.9	3.0	3.1	3.0	2.9	2.8	1.8	1.5	...
4	...	1.3	2.4	2.8	3.1	3.0	p3.1	3.0	2.8	2.8	2.4	1.6	...
5	...	1.7	2.6	2.6	3.1	...c	3.0	3.0	3.1	3.3	2.3	1.8	...
6	...	1.6	...c	2.7	3.0	3.0	3.1	3.0	3.0	3.0	p2.3	...	...
7	...	1.6	...c	...c	...c	...c	...c	...c	...c	2.7	p2.5	1.7	...
8	...	1.8	2.4	2.6	2.8	3.1	3.1	3.2	3.0	3.0	2.4	2.2	...
9	...	1.6	2.3	2.6	3.0	3.2	3.3	3.2	3.1	2.8	2.3	1.8	...
10	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.1	1.5	...
11	...	1.5	2.2	1.7	...c	2.6	...a	2.6	2.8	...a	...a	...a	...
12	...	1.5	2.2	2.6	3.0	3.1	3.1	3.1	2.9	2.8	2.4	1.5	...
13	...	...a	...a	2.7	3.0	3.1	3.1	...a	3.3	2.9	2.5	1.8	...
14	...	1.7	...a	2.5	2.9	...a	2.3	...a	...a	2.6	2.1	1.6	...
15	...	1.4	2.0	2.5	2.7	3.1	3.0	3.0	2.9	2.5	2.4	1.7	...
16	...	1.6	2.2	2.6	2.8	2.9	3.0	3.0	2.6	2.5	2.4	1.8	...
17	...	...c	...c	...c	2.8	2.8	3.0	2.9	3.0	2.7	2.2	1.8	...
18	...	1.1	1.9	2.6	2.8	2.9	3.0	3.0	2.7	2.6	2.3	1.7	...
19	...	...c	...c	...c	...c	...c	...c	...c	...c	2.6	2.1	1.7	...
20	...	1.4	2.4	2.4	2.8	3.0	...a	3.0	3.0	2.2	2.5	...a	...
21	...	1.3	p2.1	2.0	2.8	2.8	3.2	3.0	3.0	2.5	2.4	1.3	...
22	...	1.5	1.9	2.5	p2.7	...c	...c	3.0	2.9	2.8	2.4	1.7	...
23	...	1.2	2.0	2.6	2.9	3.0	3.1	...c	2.9	2.7	2.3	1.6	...
24	...	1.6	2.1	2.6	3.0	2.9	2.9	3.1	3.0	2.7	2.2	1.8	...
25	...	1.7	...c	2.6	2.8	3.1	3.2	3.1	3.1	2.6	2.4	1.5	...
26	...	1.4	2.5	2.5	2.9	3.1	3.1	3.1	3.0	2.8	2.3	1.5	...
27	...	1.5	2.7	2.6	2.9	3.0	2.9	3.1	2.9	2.8	2.5	1.5	...
28	...	1.6	2.2	2.6	2.9	3.1	3.1	3.0	3.0	2.7	2.4	1.5	...
29	...	1.6	2.4	2.8	3.1	3.1	3.2	3.0	3.0	2.8	2.3	1.5	...
30	...	1.4	2.1	2.6	3.0	3.1	3.0	3.1	3.0	2.9	2.5	1.9	...
31													
MEAN*	...	1.5	2.3	2.6	2.9	3.0	3.0	3.0	3.0	2.7	2.3	1.6	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 151

JULY 1941 — IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY — JULY 1941

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.0	4.5	4.1	4.9	5.2	4.7	4.3	4.7	6.0	6.3	7.9	8.0	6.9	6.5	7.3	8.1	7.9	5.8	4.5	3.4	3.5	4.0	4.3	4.5	5.5
2	4.0	3.7	4.0	4.5	4.7	3.7	3.5	4.4	6.3	6.5	6.9	6.5	7.7	8.0	6.6	7.1	8.0	5.4	4.8	3.0	2.9	3.4	3.2	3.6	5.1
3	3.6	3.7	4.0	4.2	4.5	4.3	3.8	4.0	6.3	...c	7.3	7.0	6.8	6.7	6.5	7.3	7.2	6.3	4.3	2.5	3.3	3.5	3.6	3.3	...
4	3.2	3.3	3.3	3.3	3.3	3.0	2.3	3.5	p5.5	6.6	6.9	7.0	6.8	7.2	6.5	7.7	7.9	7.5	5.3	2.8	2.6	2.6	2.7	3.6	4.8
5	4.1	4.5	3.8	3.7	3.9	3.9	3.6	4.8	p5.7	6.5	p7.2	6.8	7.5	10.6	9.0	6.4	6.6	6.9	4.6	2.4	2.5	2.2	2.0	1.8	5.0
6	1.2	1.9	2.3	2.1	2.1	1.9	2.1	3.3	4.3	4.7	4.6	5.3	5.1	5.7	6.1	6.2	5.9	5.3	4.2	2.9	2.9	2.6	2.6	2.7	3.6
7	2.7	2.6	2.0	2.0	1.6	1.6	...f	3.2	4.4	5.0	5.2	5.8	6.3	7.4	...c	...c	6.4	6.0	4.0	3.4	3.2	2.5	2.5	2.2	...
8	2.4	2.2	1.8	1.9	2.1	...a	...a	3.3	...c	6.0	p6.7	5.6	6.0	6.3	6.3	7.0	6.2	6.1	4.8	2.4	2.4	2.0	2.3	2.6	...
9	2.7	2.9	2.9	3.3	3.0	2.4	2.0	3.7	5.3	...c	p6.6	p6.6	7.2	p6.0	6.1	7.0	6.0	4.9	3.8	2.5	2.9	2.8	2.7	2.5	...
10	2.7	2.5	2.9	3.1	3.0	2.7	2.4	3.3	5.5	6.1	...c	...c	...c	5.5	7.6	6.9	6.2	5.8	5.0	3.7	3.2	2.7	2.6	2.8	...
11	3.0	3.0	3.2	3.5	3.0	2.3	2.2	...c	...c	6.3	6.3	6.8	7.6	6.5	7.8	6.9	7.0	6.4	4.6	3.5	3.2	...f	...f	...f	...
12	3.2	...f	4.0	3.8	4.2	3.9	4.0	4.2	5.6	5.6	6.4	6.6	7.5	6.4	7.4	7.0	6.7	5.7	4.8	3.6	3.0	2.4	2.9	2.9	...
13	3.3	3.6	3.8	3.2	3.3	3.3	2.9	3.9	5.1	5.9	6.4	6.3	7.5	8.0	6.2	5.8	6.5	6.3	4.8	2.5	3.0	3.1	p3.5	...c	...
14	2.8	2.8	3.3	3.5	3.8	3.7	3.3	3.9	5.2	5.9	7.0	6.9	6.4	6.5	6.5	6.9	6.3	6.0	4.3	3.0	2.5	2.6	3.1	3.1	4.6
15	3.3	3.7	3.7	3.1	3.4	3.4	3.4	p3.5	5.3	5.7	5.8	6.0	5.8	5.5	6.1	6.2	6.2	5.7	4.5	2.6	2.7	3.5	3.8	3.8	4.4
16	3.8	3.9	4.0	4.2	4.0	4.2	3.7	3.9	5.2	5.9	5.5	5.6	6.1	6.1	6.0	6.8	6.9	6.0	4.3	3.4	2.9	3.5	4.0	4.4	4.8
17	4.2	4.0	...f	3.4	3.8	...f	3.4	4.7	5.3	6.4	6.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
18	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	3.5	...c	3.8	3.8	3.7	...
19	3.4	3.6	3.8	4.3	4.0	4.2	p2.7	3.9	4.8	...c	...c	...c	...c	6.4	...c	7.5	7.3	6.2	5.0	2.9	3.1	3.1	4.1	4.1	...
20	3.6	4.0	4.5	4.8	4.8	4.1	3.5	4.1	5.3	6.2	6.5	6.7	6.6	6.3	7.1	7.3	6.5	6.2	5.1	3.6	3.6	4.2	4.4	3.8	5.1
21	4.3	4.4	5.0	4.9	3.9	4.3	4.0	4.3	5.5	5.8	6.6	7.8	5.9	7.2	7.7	6.7	7.9	8.1	8.4	3.9	2.5	2.9	3.1	...c	...
22	p2.8	3.0	3.7	3.9	...f	3.0	3.3	4.0	5.5	p6.0	6.0	6.7	8.4	7.3	7.7	7.6	6.6	6.4	5.4	3.6	2.8	...c	...c	...c	...
23	3.5	3.7	3.5	3.5	...c	...c	...c	...c	...c	6.7	6.7	7.2	7.0	6.1	6.7	7.2	6.7	6.2	5.5	4.0	3.2	3.9	2.5	2.5	...
24	2.5	2.8	3.0	3.2	3.4	2.9	2.7	4.1	5.7	6.0	6.9	7.0	6.8	5.9	6.7	6.2	5.7	6.0	5.9	4.5	3.5	3.0	2.8	3.0	4.6
25	3.2	3.3	3.2	3.5	3.6	3.3	2.7	4.1	6.1	6.7	7.4	p7.5	7.4	7.1	6.0	7.0	7.2	7.5	5.5	3.6	2.7	3.2	3.0	3.3	4.9
26	3.1	3.2	3.4	3.3	3.4	3.7	2.8	4.1	5.8	7.9	7.0	6.5	7.4	6.6	7.7	7.3	5.9	6.4	4.3	3.6	3.2	3.3	3.5	3.5	4.9
27	3.2	p3.3f	3.3	3.2	2.7	2.4	2.4	4.3	p5.8	7.0	7.0	7.8	7.1	6.6	7.9	7.2	6.8	6.9	5.2	3.1	3.4	3.5	3.5	3.3	4.9
28	3.0	3.0	3.0	3.1	3.5	3.1	2.5	4.1	p5.2	p6.1c	7.1	6.9	6.9	6.8	7.5	7.8	6.9	7.4	5.8	4.5	3.1	3.0	2.7	3.0	4.8
29	3.0	3.2	3.3	3.5	3.5	3.1	2.7	...c	...c	6.0	6.6	7.2	7.0	7.7	7.0	7.1	7.7	7.3	5.5	4.7	3.8	3.3	3.4	3.5	...
30	3.5	3.8	3.9	4.1	3.8	3.9	3.3	4.7	6.4	6.9	7.3	8.5	7.3	7.8	6.7	7.7	6.8	8.2	5.1	4.5	3.8	3.3	3.5	3.6	5.4
31	3.6	3.7	3.6	3.6	3.8	3.5	3.1	3.7	6.2	6.5	6.9	7.0	7.2	7.4	7.0	7.5	7.9	7.0	5.7	4.2	4.8	3.8	3.9	3.6	5.2
* MEAN	3.2	3.4	3.5	3.6	3.5	3.4	3.0	4.0	5.5	6.2	6.6	6.8	6.9	6.8	7.0	7.0	6.8	6.4	5.0	3.4	3.1	3.1	3.2	3.2	4.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 152

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1941 JULY 1941

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	240	235	240	220	200	215	210	220	250	230	245	310	250	260	250	235	200	215	235	250	235	240	225	235
2	225	255	270	240	220	205	250	230	220	230	245	250	280	260	250	280	230	215	200	225	290	215	235	230	240
3	260	265	250	250	230	210	230	220	230	...c	235	230	270	250	270	260	235	220	210	210	250	230	250	265	...
4	250	250	250	225	235	225	230	235	p235	230	235	250	260	250	270	290	240	225	210	220	260	240	290	250	244
5	250	220	210	230	230	240	260	195	p210	235	p280	290	290	280	260	260	260	300	360	p140	135	135	...a	130	...
6	p110	510	355	370	320	380	305	290	275	270	290	300	310	320	310	270	240	230	235	255	245	275	250	290	292
7	270	260	280	295	250	245	...a	240	250	285	310	340	360	300	...c	...c	260	215	235	250	240	285	275	270	...
8	260	250	275	260	240	...a	...a	245	...c	235	p255	250	270	270	270	250	240	230	...c	...c	...c	220	290	250	...
9	285	285	265	240	215	230	270	230	225	...c	p245	p280	270	p270	285	255	230	210	200	285	250	230	255	260	...
10	245	260	255	230	220	210	235	250	240	225	...c	...c	...c	290	250	235	255	220	240	200	215	210	210	240	...
11	270	290	265	215	220	185	250	...c	...c	250	280	245	260	250	255	250	240	220	200	240	240	235	250	280	...
12	290	270	275	255	250	235	225	210	220	240	270	265	260	260	250	250	230	225	220	235	240	250	260	260	248
13	280	270	220	240	240	235	220	230	215	240	250	230	265	240	245	250	250	220	200	250	250	260	p230	...c	...
14	220	240	260	280	250	220	210	220	225	250	240	225	240	260	255	235	250	220	220	240	215	260	250	250	239
15	240	240	230	220	225	215	210	p220	220	235	245	240	270	230	280	255	225	225	200	220	270	230	230	235	234
16	220	230	240	230	230	230	215	220	220	245	265	270	280	270	270	265	240	220	210	195	250	235	250	235	239
17	220	235	250	260	270	...a	250	230	220	240	280	...c	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...c	210	...c	210	220	235	...
19	230	230	230	230	235	205	p170	210	210	...c	...c	...c	...c	380	...c	260	210	225	210	200	240	250	230	240	...
20	250	250	245	225	205	205	190	230	205	245	260	270	270	270	300	245	225	235	220	245	220	200	240	250	238
21	230	230	245	220	210	225	210	220	220	265	260	270	250	295	250	300	260	245	205	195	270	260	235	...c	...
22	p245	250	245	250	...a	225	210	230	220	p245	265	290	270	330	290	260	240	240	220	215	225	...c	...c	...c	...
23	275	280	275	270	...c	...c	...c	...c	...c	245	250	230	270	290	245	250	250	235	230	240	225	230	225	270	...
24	250	270	250	240	225	240	250	205	230	245	250	245	250	250	250	235	230	240	215	215	220	220	250	250	239
25	265	250	260	250	225	210	225	235	230	245	250	p260	280	240	240	250	260	235	200	210	230	240	235	280	232
26	280	250	250	260	220	210	210	240	225	250	250	255	245	255	290	240	230	235	220	230	p220a	215	275	270	243
27	260	250	230	230	200	250	240	230	p215	220	255	250	285	255	250	240	250	230	210	210	240	245	230	220	237
28	270	260	260	245	240	200	250	220	230	250	250	250	290	300	260	240	230	230	210	220	220	225	205	250	242
29	285	280	250	240	230	225	195	...c	...c	220	250	260	350	260	280	225	255	235	215	210	225	215	235	270	...
30	250	250	250	250	235	230	215	200	230	250	250	240	300	320	245	290	235	240	195	215	230	230	220	265	243
31	270	280	260	260	240	265	230	250	230	250	255	280	265	255	270	270	255	230	200	220	225	215	245	230	248
MEAN*	251	264	255	248	232	228	228	228	226	244	256	260	279	274	265	256	241	229	218	222	235	232	244	249	244

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 153

JULY 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1941

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.1	4.3	4.3	4.4	...a	...a	3.9	...	...	...
2	...	...	...	3.7	4.2	4.3	4.6	4.4	4.2	4.4	...	...	...
3	...	...	...	...c	4.0	4.3	4.5	4.3	4.1	4.2	3.4	...	...
4	...	...	...	3.7	4.2	4.5	4.4	4.4	4.0	4.2	...	...	...
5	...	...	...	3.3	4.3	4.3	4.5	4.4	4.2	4.0	...	...	...
6	...	...	3.0	3.2	3.5	4.1	4.1	4.3	4.3	3.8	...	...	...
7	...	...	...	4.0	4.0	4.3	4.5	4.3	...c	...c	3.5	...	...
8	...	...	...	3.7	4.1	4.2	4.2	3.8	4.2	4.1	...	...	...
9	...	...	...	...c	4.2	4.2	4.3	4.2	4.2	3.7	...	...	...
10	...	...	...	3.2	...c	...c	...c	4.4	4.1	4.0	3.1	...	...
11	...	...	...	3.9	4.7	4.4	4.3	4.3	3.7	3.8	...	...	...
12	...	...	2.8	3.4	4.2	4.3	4.3	4.3	4.2	4.1	3.2	...	...
13	...	...	...	3.9	4.2	4.2	4.5	4.4	4.2	4.0	3.6	...	...
14	...	...	...	4.0	4.1	4.4	4.4	4.2	4.2	3.6	2.9	...	...
15	...	...	...	3.2	4.1	4.3	4.2	4.2	4.2	4.0	...	...	...
16	...	...	...	3.9	4.3	4.2	4.0	4.2	4.2	4.0	3.5	...	...
17	...	...	...	3.7	4.3	...c	...c	...c	...c	...c	...c	...	...
18	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
19	...	...	...	...c	...c	...c	...c	5.4	...c	4.1	...	...	...
20	...	...	...	3.4	4.1	4.3	4.5	4.4	4.2	4.0	...	...	...
21	...	...	...	3.9	4.3	4.4	4.4	4.1	4.4	4.3	...	...	...
22	...	...	...	3.8	4.3	4.4	4.0	5.2	4.5	4.2	...	...	...
23	...	...	...	4.0	4.2	4.3	4.6	4.5	4.5	...a	...	...	...
24	...	...	...	3.9	4.2	4.3	4.5	4.3	4.0	3.4	...	...	...
25	...	...	...	3.9	4.4	4.5	4.6	4.2	4.2	3.5	3.8	...	...
26	...	...	...	...	4.4	4.6	4.5	4.4	4.4	4.1	...	...	...
27	...	...	...	4.0	4.3	4.5	4.7	4.6	4.4	4.0	...	...	...
28	...	...	...	...	4.4	4.6	4.8	4.8	4.6	4.3	...	...	...
29	...	...	...	...	4.5	4.6	5.3	4.8	4.3	...	...	...	...
30	...	...	...	4.3	4.7	4.8	4.9	4.9	4.5	4.7	...	...	...
31	...	...	...	3.9	4.7	4.9	4.8	4.7	4.5	4.2	...	...	...
* MEAN	...	...	2.9	3.8	4.3	4.4	4.5	4.4	4.8	4.0	3.4	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	235	215	315	...a	...a	...a	...	...	...
2	...	...	...	220	195	245	220	220	...a	...a	...	...	...
3	...	...	...	...	230	210	190	220	210	230	230	...	...
4	...	...	...	210	200	195	...a	220	200	210	...	...	...
5	...	...	...	200	220	200	230	220	200	200	...	...	...
6	...	...	240	225	220	200	250	275	235	230	...	...	...
7	...	...	...	220	230	230	215	220	...c	...c	250	...	...
8	...	...	...	230	220	190	185	200	200	260	...	...	...
9	...	...	...	...c	215	220	240	200	230	225	...	...	...
10	...	...	...	185	...c	...c	...c	200	230	225	220	...	...
11	...	...	...	240	225	240	225	...a	200	230	...	...	...
12	...	...	215	200	190	200	190	230	220	230	215	...	...
13	...	...	...	240	180	175	220	190	200	200	240	...	...
14	...	...	...	220	175	220	200	200	220	200	185	...	...
15	...	...	...	200	195	230	200	170	200	245	...	...	...
16	...	...	...	230	220	205	...a	230	195	245	230	...	...
17	...	...	...	240	160	...c	...c	...c	...c	...c	...c	...	...
18	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
19	...	...	...	...c	...c	...c	...c	205	...c	220	...	...	...
20	...	...	...	240	250	215	235	215	210	220	...	...	...
21	...	...	...	245	215	200	190	180	220	220	...	...	...
22	...	...	...	215	220	225	220	220	230	230	...	...	...
23	...	...	...	220	200	200	180	200	240	...a	...	...	...
24	...	...	...	200	205	205	200	200	200	210	...	...	...
25	...	...	...	240	235	235	230	200	220	200	250	...	...
26	...	...	...	...	220	200	215	215	210	230	...	...	...
27	...	...	...	230	220	235	230	210	220	220	...	...	...
28	...	...	...	...	235	220	210	235	225	250	...	...	...
29	...	...	...	...	235	220	200	250	215	...	...	...	...
30	...	...	...	230	215	220	200	215	230	210	...	...	...
31	...	...	...	210	235	235	230	230	220	220	...	...	...
* MEAN	...	...	228	222	214	214	217	214	215	223	228	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 154

JULY 1941 JULY 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.6	0.7	0.7	0.8	1.0	2.4	1.0	0.8	0.7	0.7	...
2	...	...e	0.5	0.8	0.8	1.8	1.0	0.9	0.8	0.7	0.6	0.7	...
3	...	...e	0.5	...c	0.7	1.0	1.0	0.8	0.8	0.7	0.7	0.5	...
4	...	0.5	0.7	0.7	0.8	0.9	1.0	1.0	0.7	0.8	0.7	0.7	...
5	...	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	...
6	...	...e	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.6	...
7	...	...e	0.8	0.7	0.7	0.8	0.7	1.0	...c	...c	0.9	0.7	...
8	...	...e	...c	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.8	0.6	...
9	...	0.5	0.7	...c	0.8	1.8	1.0	0.9	0.8	0.8	0.7	0.7	...
10	...	...e	0.6	0.7	...c	...c	...c	0.8	1.0	0.7	0.7	0.7	...
11	...	...c	...c	0.8	0.8	0.8	0.8	0.7	1.0	0.6	0.6	0.6	...
12	...	0.6	0.6	0.6	0.8	0.6	0.6	0.6	0.7	0.7	0.8	0.6	...
13	...	...e	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.6	0.7	...
14	...	0.7	1.0	0.8	0.8	0.9	0.9	0.8	0.9	0.9	1.0	0.8	...
15	...	p0.5	0.9	0.9	1.0	0.8	0.8	0.9	0.8	1.0	0.9	0.7	...
16	...	...e	0.7	0.7	0.8	0.8	0.8	1.0	0.8	0.7	0.6	0.7	...
17	...	...e	0.8	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...
18	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
19	...	0.6	0.7	...c	...c	...c	...c	0.9	...c	0.7	0.7	0.7	...
20	...	0.6	0.7	0.7	1.1	1.1	1.0	0.9	1.1	1.0	1.0	...e	...
21	...	0.7	0.8	0.8	0.8	1.0	1.0	0.9	0.8	1.0	0.9	1.0	...
22	...	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.7	...
23	...	...c	...c	0.8	1.0	1.0	1.0	1.0	1.8	0.9	0.9	0.8	...
24	...	...e	0.7	0.8	0.7	0.8	0.8	0.9	1.0	0.7	0.8	0.6	...
25	...	0.5	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.7	0.6	0.6	...
26	...	0.6	0.9	0.8	0.8	1.0	1.2	1.1	0.9	0.9	0.8	0.8	...
27	...	0.6	0.7	0.9	1.0	1.0	1.7	0.8	1.0	1.0	0.9	0.8	...
28	...	0.6	0.8	0.9	1.1	0.9	1.1	1.0	1.7	1.1	0.9	0.8	...
29	...	...c	...c	0.8	0.9	0.9	1.0	1.0	0.9	0.8	0.6	0.7	...
30	...	...e	0.8	0.9	0.9	1.0	1.7	1.0	1.0	1.0	0.8	0.8	...
31	...	...e	0.7	0.8	0.8	1.0	1.0	1.0	1.0	0.9	0.9	0.7	...
* MEAN	...	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.0	0.8	0.8	0.7	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.5	2.1	2.7	2.9	3.2	...a	...a	...a	...a	...a	1.5	...
2	...	1.5	2.2	2.7	3.0	3.4	2.9	2.5	...a	...a	...a	2.0	...
3	...	1.4	2.1	...c	2.7	3.2	3.2	3.1	3.0	2.8	2.4	1.6	...
4	...	1.5	2.4	2.7	2.9	3.0	3.2	3.1	2.9	2.9	3.0	...a	...
5	...	1.5	p2.0	2.4	2.8	2.7	2.8	3.0	2.9	2.7	2.2	1.7	...
6	...	1.5	2.0	2.3	2.7	2.9	3.0	...a	2.9	2.8	...a	1.5	...
7	...	1.7	2.2	2.5	2.8	3.0	3.1	3.2	...c	...c	2.0	1.7	...
8	...	1.7	...c	2.5	2.9	3.1	3.1	3.3	3.1	2.9	2.4	1.8	...
9	...	1.3	2.2	...o	2.7	3.2	3.2	3.0	3.0	2.8	2.4	1.5	...
10	...	1.7	2.1	2.5	...c	...o	...c	3.2	3.2	2.9	2.4	1.6	...
11	...	...c	...c	2.6	2.9	3.1	3.1	2.7	3.0	2.9	2.4	1.8	...
12	...	1.6	2.2	2.5	2.8	3.0	3.0	2.9	3.0	2.7	2.4	1.8	...
13	...	1.3	2.0	2.5	2.7	3.0	3.1	3.1	3.0	2.8	2.4	1.6	...
14	...	1.2	2.1	2.6	2.7	3.0	3.0	2.7	3.1	2.8	2.4	1.9	...
15	...	p1.2	2.1	2.6	2.7	2.8	3.0	3.0	2.9	2.7	2.4	1.6	...
16	...	1.6	2.0	2.6	2.9	3.0	3.1	2.8	2.9	2.5	2.4	1.9	...
17	...	1.5	2.1	3.0	2.9	...c	...c	...c	...c	...c	...c	...c	...
18	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
19	...	1.8	2.1	...c	...c	...c	...c	3.0	...c	2.8	2.5	1.9	...
20	...	1.6	2.5	2.7	3.0	3.1	3.2	3.0	2.6	2.2	...a	...a	...
21	...	1.6	2.4	2.7	3.0	3.1	3.1	2.8	3.1	2.9	2.4	1.8	...
22	...	1.7	2.3	2.7	2.9	3.0	3.1	3.1	3.0	3.0	2.5	1.9	...
23	...	...c	...c	2.7	2.9	3.0	3.2	3.0	3.3	...a	2.6	1.8	...
24	...	1.7	2.4	2.7	2.9	3.1	3.3	3.3	3.1	2.9	2.7	2.0	...
25	...	1.3	2.2	2.7	3.0	3.2	3.3	3.3	3.1	2.9	2.5	1.9	...
26	...	1.8	2.3	2.8	3.1	3.3	3.2	3.4	3.3	3.0	2.5	2.0	...
27	...	1.8	2.0	2.9	3.1	3.2	3.0	3.5	3.1	3.1	2.8	2.0	...
28	...	1.4	2.0	2.9	3.4	3.2	3.5	3.4	3.2	2.5	2.7	2.0	...
29	...	...c	...c	3.0	3.2	3.4	3.4	3.4	3.5	3.2	2.9	2.0	...
30	...	1.6	2.3	2.9	3.2	3.4	3.5	3.5	3.3	3.1	2.7	1.9	...
31	...	1.0	2.7	2.8	3.2	3.3	3.5	3.4	3.4	3.2	2.8	1.9	...
* MEAN	...	1.5	2.2	2.7	2.9	3.1	3.2	3.1	3.1	2.8	2.5	1.8	...

*=ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 155

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1941 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — AUGUST 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.7	4.0	4.4	4.5	4.9	4.7	3.4	4.5	6.5	p7.0	7.0	7.5	7.3	6.8	8.0	7.7	7.2	7.8	5.6	5.5	4.3	5.1	3.3	3.5	5.6
2	3.9	4.0	4.3	4.9	5.2	3.9	3.4	4.5	6.2	7.5	8.0	8.4	7.6	7.9	p8.3	...c	...c	7.9	7.1	6.0	4.8	4.0	4.3	4.6	...
3	4.8	5.1	4.6	5.3	5.6	3.5	3.0	4.6	p6.1	8.0	7.5	8.9	8.7	8.0	8.1	p8.0	p7.2	6.7	6.5	4.4	4.0	3.3	3.0	3.1	5.8
4	3.1	3.5	3.3	3.1	2.7	2.8	2.9	5.0	6.7	7.2	7.6	7.7	9.2	p9.0c	8.4	p8.7c	9.1	7.8	6.6	4.4	3.6	3.5	3.3	3.8	5.5
5	2.9	3.8	3.1	2.4	2.0	1.9	1.9	4.0	p4.6c	5.2	4.8	5.0	5.0	4.8	5.4	5.6	5.3	5.5	4.4	3.1	2.3	1.8	1.7	1.7	3.7
6	1.7	1.7	1.9	p1.8a	1.7	1.7	1.6	3.3	...c	...c	...c	...c	6.7	6.8	6.0	p6.5	6.7	6.0	4.6	2.8	2.1	2.2	2.4	2.5	...
7	2.5	2.5	2.2	2.3	2.3	2.7	2.2	4.6	6.1	5.8	6.5	6.5	7.2	7.0	7.2	6.8	6.0	6.0	5.6	5.1	2.4	2.2	1.9	2.2	4.4
8	1.9	1.6	p1.8f	2.0	2.0	p1.8f	1.7	4.0	5.8	6.3	7.5	7.7	7.2	7.2	...c	...c	...c	...c	5.5	3.6	2.7	p2.5f	p2.3f	2.0	...
9	2.1	2.3	2.4	2.5	2.6	2.3	2.2	4.4	5.5	5.9	7.1	7.4	7.5	7.1	6.8	7.2	7.2	6.3	5.1	3.8	3.1	2.8	2.9	2.7	4.6
10	2.7	2.9	2.9	3.1	3.3	3.4	2.4	4.5	6.0	6.3	7.7	7.5	7.1	6.7	7.7	7.4	...c	...c	5.2	4.3	3.3	3.0	2.8	2.6	...
11	2.9	3.1	3.3	3.6	3.5	3.2	2.9	4.8	6.3	6.1	6.7	7.5	7.2	7.0	8.2	7.0	6.6	6.1	6.3	4.8	4.1	4.1	3.4	3.5	5.1
12	3.6	3.5	3.4	3.6	3.5	3.3	2.9	4.1	p6.1	7.0	6.5	6.6	7.4	6.9	7.9	7.6	7.5	5.9	6.2	5.4	3.8	3.7	4.1	3.5	5.2
13	3.5	3.3	3.4	3.5	3.4	3.0	3.1	5.1	6.0	6.8	7.2	6.5	6.7	6.1	8.4	7.4	6.6	6.7	5.7	5.7	4.6	3.7	3.9	4.1	5.2
14	4.2	4.1	4.2	4.5	4.7	4.5	4.0	4.8	6.0	6.4	7.1	7.7	7.8	6.5	7.5	8.0	6.6	5.4	6.0	5.8	5.0	3.8	4.3	4.3	5.6
15	4.0	3.8	4.1	4.5	4.7	4.5	4.8	5.3	6.5	6.4	6.3	6.6	7.0	7.4	6.7	7.0	6.8	5.8	6.2	5.4	4.6	4.1	3.9	3.9	5.4
16	3.7	3.5	3.9	4.0	4.3	4.2	3.5	5.1	5.5	6.3	6.8	7.0	7.1	6.6	6.9	6.8	6.3	6.2	5.8	5.6	4.3	4.0	3.5	3.7	5.2
17	4.1	4.3	4.2	4.3	4.2	3.5	3.3	4.9	6.3	6.1	6.5	6.5	7.8	7.2	7.3	7.4	6.8	6.6	5.6	4.1	3.3	3.3	3.3	3.3	5.2
18	3.4	3.0	3.0	3.2	3.0	3.2	3.0	5.1	5.9	6.3	7.4	6.0	7.4	6.6	7.7	7.6	7.3	6.7	5.9	5.4	4.0	3.0	2.6	2.6	5.0
19	2.8	2.8	2.8	3.0	3.0	3.0	3.0	5.0	6.0	6.6	6.9	7.9	8.0	8.5	8.6	8.6	7.3	7.6	6.4	5.4	4.1	4.3	4.3	4.5	5.4
20	4.7	4.1	4.0	4.0	4.0	3.7	3.7	5.5	7.1	6.9	7.4	8.7	7.0	8.3	6.6	7.0	7.6	7.1	6.4	4.1	3.0	2.8	3.3	3.2	5.4
21	3.2	3.3	3.1	3.0	2.8	2.4	2.2	4.9	6.6	p7.0c	7.5	7.4	6.9	6.6	7.0	7.8	6.5	7.0	6.4	4.9	3.5	3.5	3.0	3.1	5.0
22	3.3	3.5	3.1	3.3	3.2	3.4	3.3	5.4	6.3	...c	...c	...c	9.0	7.7	8.5	7.4	6.6	6.6	6.3	3.8	2.6	2.9	3.2	3.3	...
23	3.3	3.5	3.3	3.4	3.0	3.2	3.2	5.0	p6.0c	7.0	7.4	8.7	6.6	7.1	6.5	7.7	6.8	7.0	5.9	5.2	4.6	4.3	3.4	3.2	5.2
24	3.4	3.7	4.1	4.5	4.7	4.7	4.2	5.5	6.2	6.8	7.5	7.8	7.0	7.1	7.2	7.6	6.0	7.0	6.9	5.6	5.1	4.3	3.7	3.9	5.6
25	3.6	3.8	4.1	4.3	4.3	4.6	3.9	5.7	p6.2c	6.7	7.5	7.6	8.0	8.2	8.3	8.0	7.4	6.8	6.0	5.1	4.2	3.8	4.2	4.1	5.7
26	4.5	4.4	4.2	4.3	4.6	4.8	4.8	p5.3	...c	...c	...c	...c	...c	9.0	8.7	8.0	8.3	7.7	6.8	5.5	5.5	4.8	4.3	4.4	...
27	4.1	4.1	4.4	3.8	4.1	5.2	5.0	5.2	6.4	6.9	6.5	8.0	8.0	9.0	7.2	8.2	7.6	7.2	6.7	4.7	4.3	4.2	4.0	4.1	5.8
28	4.3	4.2	4.1	4.1	3.8	3.5	3.3	4.8	5.6	5.7	6.2	6.5	6.5	6.5	7.9	7.4	6.3	5.9	6.6	5.1	4.1	3.5	2.6	2.3	5.0
29	1.9	1.6	1.7	1.8	1.9	1.8	2.4	5.6	6.1	6.5	6.7	6.9	7.4	7.6	6.9	7.6	7.3	6.8	6.0	5.8	5.1	3.6	3.3	2.8	4.8
30	2.9	3.0	3.0	3.3	3.4	3.2	3.4	5.2	6.2	6.0	p6.3	7.0	7.0	6.9	7.0	7.6	7.3	6.7	5.9	5.1	4.3	3.9	3.3	3.0	5.0
31	3.0	2.7	3.0	p3.2	p2.4	...c	...c	...c	...c	7.3	7.6	8.0	8.6	7.6	7.9	7.8	8.0	7.8	6.7	5.5	3.7	3.6	3.7	3.6	...
MEAN*	3.4	3.4	3.4	3.5	3.5	3.4	3.2	4.9	6.1	6.6	7.0	7.3	7.4	7.3	7.5	7.5	7.0	6.7	6.0	4.9	3.9	3.5	3.3	3.3	5.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 156

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — AUGUST 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	265	265	240	225	215	230	235	240	p255	245	240	270	260	255	260	215	240	215	210	215	220	235	245	239
2	245	265	270	240	215	205	230	230	230	255	255	275	330	285	p290	...c	...c	235	215	215	220	270	260	270	...
3	275	245	265	230	210	205	210	245	p220	250	255	265	275	260	295	260	260	225	230	240	230	235	240	275	246
4	300	260	235	235	240	245	230	235	230	255	265	265	260	p270c	280	p260c	240	230	240	265	250	315	330	295	260
5	310	290	245	270	300	290	290	270	p280c	300	p380f	p420f	p415f	p530f	375	300	245	260	225	230	280	300	290	310	309
6	300	...a	...a	...a	255	285	285	255	...c	...c	...c	...c	350	295	295	290	265	225	230	210	275	265	230	270	...
7	255	245	255	220	210	230	280	240	230	245	335	295	290	300	290	270	230	240	240	215	195	...f	280	260	...
8	280	...f	...f	330	...a	...f	...f	220	230	255	270	250	245	270	...c	...c	...c	...c	200	200	220	250	...a	265	...
9	280	260	260	240	225	215	240	220	220	235	270	250	240	265	235	245	235	230	200	200	250	230	240	240	239
10	260	265	255	...d	...d	225	230	220	230	240	260	255	240	240	260	260	...c	...c	215	190	210	230	225	210	...
11	260	250	265	240	210	220	220	230	230	220	260	250	235	280	250	250	225	230	215	205	240	240	250	245	238
12	260	250	300	275	240	260	235	250	p220	245	245	265	255	280	250	265	240	225	220	210	220	240	230	210	245
13	230	230	240	235	220	240	240	220	220	240	265	305	245	250	250	260	230	210	210	210	210	210	255	260	236
14	225	230	240	255	220	230	200	230	230	280	270	285	250	250	285	250	235	210	230	230	210	250	250	230	241
15	225	230	260	235	225	230	210	220	235	250	250	270	275	255	280	240	250	215	215	205	235	220	240	250	238
16	250	230	235	220	215	200	230	220	225	270	250	265	275	220	260	250	250	250	220	210	205	210	205	250	234
17	240	245	225	225	205	220	225	230	220	240	240	260	240	270	270	275	250	230	210	230	230	250	250	240	238
18	230	230	220	225	205	230	230	225	230	240	245	250	250	290	240	300	240	220	205	210	210	230	240	240	235
19	245	240	240	230	220	225	230	215	240	275	280	290	270	290	280	265	230	230	210	220	205	230	240	240	243
20	230	230	230	210	225	220	250	235	225	235	255	240	275	290	250	275	265	230	215	190	250	220	230	270	239
21	265	240	265	280	215	210	260	230	245	p250c	255	270	240	325	275	275	250	240	210	220	240	230	270	250	250
22	275	260	260	220	245	250	220	230	220	...c	...c	...c	235	245	260	250	240	240	215	210	210	230	240	255	...
23	245	240	240	220	220	220	230	220	p230c	240	255	250	280	260	260	255	245	230	220	210	220	275	200	210	236
24	230	255	240	235	230	230	215	230	230	270	265	260	260	270	295	250	255	235	210	220	215	230	230	235	241
25	230	230	250	240	240	230	220	225	p230c	230	280	270	280	300	260	265	260	245	210	210	215	225	230	255	243
26	255	225	250	250	240	265	220	p215	...c	...c	...c	...c	...c	300	275	270	265	235	215	215	215	230	240	250	...
27	240	260	240	260	270	250	220	230	245	275	360	315	290	290	280	285	255	240	220	215	225	260	260	260	260
28	285	280	270	270	270	270	270	265	270	300	295	350	330	290	270	270	260	230	230	225	230	230	255	275	270
29	235	310	300	275	295	290	265	235	240	260	270	270	275	265	300	295	250	235	230	215	220	230	240	265	260
30	250	295	305	270	265	280	260	250	225	230	p300	295	305	300	310	280	260	230	230	220	230	230	215	265	262
31	270	270	250	p230	...a	...c	...c	...c	...c	270	275	290	260	260	295	260	250	225	215	225	265	280	p285a	290	...
MEAN*	255	253	254	245	234	237	237	232	233	254	273	277	275	282	276	266	246	232	218	215	227	242	246	254	248

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 157

AUGUST 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1941

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION													MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.0	4.3	4.7	4.7	4.6	4.2	4.3	...	...	...	...	...	...	215	235	240	230	230	220	225	...	...	...
2	...	...	...	...	...	4.2	5.5	4.8	p4.8	...	...	...	...	...	...	...	...	...	240	245	230	p230	...	...	...	...
3	...	...	...	4.2	4.4	4.6	4.7	4.5	4.6	4.4	3.6	...	...	...	...	...	235	220	215	230	220	230	230	235	...	...
4	...	...	...	4.0	4.7	4.7	4.8	p4.6c	4.5	p4.2c	3.8	...	...	...	...	...	220	220	195	...	...c	220	p225c	235	...	...
5	...	...	...	3.8	4.2	4.3	4.3	4.4	4.3	4.1	...	...	...	...	...	...	230	245	235	235	260	230	240	...	...	...
6	...	...	...	...c	...c	...c	4.5	4.7	4.5	4.2	3.8	...	...	...	...	...	...c	...c	...c	205	235	215	240	235	...	...
7	...	...	3.3	3.7	4.6	4.6	4.5	...a	4.5	4.3	...	...	...	...	...	230	215	245	230	...a	...a	...a	220	...	...	...
8	...	...	3.0	4.3	4.6	4.6	4.6	4.5	...c	...c	...	...	...	...	...	200	220	220	230	215	205	...c	...c	...c	...	...
9	...	...	...	4.1	4.6	4.7	4.7	4.6	4.5	4.3	...	...	...	...	...	...	205	225	215	220	200	...a	...a	...	...	...
10	...	...	...	4.2	4.4	4.5	4.7	4.6	4.4	4.1	...	...	...	...	...	...	235	220	180	220	225	190	220	...	...	...
11	...	...	...	...	4.4	4.6	4.6	4.5	4.1	4.3	...	...	...	...	...	...	...	180	235	220	200	190	200	...	...	...
12	...	...	...	4.2	4.3	4.6	4.6	p4.4a	4.3	4.1	3.7	...	...	...	...	...	225	215	220	200	p200a	200	200	230	...	...
13	...	...	3.3	4.1	4.5	4.6	4.5	4.5	4.5	3.9	...	...	...	...	...	200	200	235	215	205	220	265	220	...	...	...
14	...	...	...	4.2	4.5	4.7	4.6	4.5	4.5	4.3	3.4	...	...	...	...	...	230	230	195	220	200	200	210	200	...	...
15	...	...	...	4.2	4.4	4.5	4.5	4.5	4.2	4.3	3.5	...	...	...	...	...	220	215	230	210	200	200	230	220	...	...
16	...	...	...	4.2	4.4	4.5	4.6	4.5	4.4	4.2	3.7	...	...	...	...	...	235	225	220	225	205	200	220	220	...	...
17	...	...	...	4.1	4.4	4.5	4.6	4.6	4.5	4.2	3.8	...	...	...	...	...	220	210	200	200	200	190	200	235	...	...
18	...	...	...	4.0	4.5	4.4	4.6	4.8	4.4	4.4	4.0	...	...	...	...	...	220	235	220	230	215	210	190	235	...	...
19	...	...	...	4.8	4.5	4.6	4.7	4.7	4.5	4.2	...	...	...	...	...	...	225	240	220	230	215	215	215	...	...	...
20	...	...	...	4.1	4.4	4.4	4.6	...	4.5	4.3	4.0	...	...	...	...	...	200	200	220	205	...	220	205	225	...	...
21	...	...	3.8	p4.2c	4.6	4.6	4.6	5.0	4.8	4.3	...	...	...	...	...	235	p220c	205	200	200	190	200	220	...	...	...
22	...	...	...	...c	...c	...c	4.8	4.6	4.5	4.3	4.0	...	...	...	...	...	...c	...c	...c	180	200	215	220	200	...	...
23	...	...	...	4.2	4.7	4.6	4.8	4.5	4.6	4.5	...	...	...	...	...	...	210	225	200	220	200	200	225	...	...	...
24	...	...	...	4.7	4.7	4.7	4.7	4.7	4.7	4.4	4.0	...	...	...	...	...	215	200	220	190	210	190	235	240	...	...
25	...	...	...	...c	4.8	4.8	4.8	4.8	4.6	4.3	...	...	...	...	...	...	...c	210	200	220	220	220	205	...	...	...
26	...	...	...	...c	...c	...c	...c	4.9	4.7	4.3	4.0	...	...	...	...	...	...c	...c	...c	...c	195	220	230	220	...	...
27	...	...	...	4.3	4.7	4.7	4.9	4.7	4.6	4.5	3.9	...	...	...	...	...	225	220	220	210	220	230	235	225	...	...
28	...	...	3.7	4.3	4.5	4.5	4.7	4.7	4.3	4.3	3.8	...	...	...	...	240	210	225	210	215	240	195	225	215	...	...
29	...	...	3.8	4.2	4.6	4.7	4.6	4.7	4.8	4.5	4.0	...	...	...	...	225	215	220	205	200	190	210	200	220	...	...
30	...	...	...	3.5	p4.5	4.7	4.7	4.7	4.7	4.4	4.1	...	...	...	...	...	...a	p210	220	205	220	220	210	235	...	...
31	...	...	...	4.1	4.7	4.8	4.9	4.8	4.6	p4.3a	4.0	...	...	...	...	...	225	200	220	220	220	...a	...a	220	...	...
* MEAN	...	...	3.5	4.2	4.5	4.6	4.7	4.6	4.5	4.3	3.8	...	...	...	...	222	220	220	216	214	213	212	218	225	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 158

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1941 AUGUST 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.9	0.8	0.8	0.7	0.8	0.8	0.9	0.9	0.8	0.6	...
2	...	0.7	0.7	2.0	1.9	1.8	1.8	0.9	p1.0	p0.9c	p0.8c	0.8	...
3	...	0.6	p0.7	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	...
4	...	0.5	0.7	1.0	0.9	1.0	0.8	p0.8c	0.9	p0.9c	0.8	0.6	...
5	...	0.6	p0.7c	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7	...
6	...	...e	...c	...c	...c	...c	0.9	0.7	0.8	0.7	0.7	0.8	...
7	...	0.8	0.6	0.8	0.9	0.8	0.9	0.9	0.9	0.8	0.7	0.6	...
8	...	0.5	0.7	0.6	0.7	0.6	0.7	0.7	...c	...c	...c	...c	...
9	...	0.6	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...
10	...	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	...c	...c	...
11	...	0.8	0.7	0.8	0.8	0.9	0.8	0.9	1.0	0.9	0.8	0.7	...
12	...	0.6	0.8	0.9	0.7	0.8	0.8	0.8	0.8	0.6	0.7	0.8	...
13	...	0.7	0.9	0.9	1.1	1.0	1.1	1.1	1.0	0.7	0.8	...	...
14	...	0.8	0.6	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.8	...
15	...	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8	...
16	...	0.6	0.7	0.7	0.8	0.8	0.9	0.7	0.8	0.8	0.8	0.7	...
17	...	0.6	0.7	0.8	0.9	0.8	1.0	1.0	0.8	0.8	0.8	0.9	...
18	...	0.8	0.8	0.8	0.9	0.8	1.0	1.0	0.8	0.8	0.9	0.8	...
19	...	0.8	0.7	0.8	0.9	1.0	1.0	1.0	0.8	0.8	0.8	0.8	...
20	...	0.8	1.0	0.8	1.0	1.0	1.7	1.1	1.7	1.0	0.8	0.8	...
21	...	0.9	0.7	p0.8c	0.9	0.8	1.1	0.9	0.9	0.9	1.0	0.8	...
22	...	0.6	0.8	...c	...c	...c	1.1	1.0	1.0	1.0	0.8	0.7	...
23	...	p0.7	p0.8c	0.8	0.7	0.8	1.0	0.8	0.8	0.8	0.8	0.8	...
24	...	0.8	p0.8	0.8	0.8	1.0	0.8	0.8	0.9	0.9	1.0	0.8	...
25	...	0.7	p0.8c	0.8	1.0	0.8	p1.0	1.1	0.9	0.8	0.7	0.7	...
26	...	...c	...c	...c	...c	...c	...c	0.9	0.9	1.0	0.8	0.7	...
27	...	0.8	0.7	0.8	0.8	0.8	1.0	1.0	0.8	0.9	0.8	0.8	...
28	...	0.8	0.8	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.8	0.8	...
29	...	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0	0.8	0.8	0.8	...
30	...	0.8	0.8	1.0	0.9	1.0	1.0	1.0	1.0	0.8	0.8	0.9	...
31	...	...c	...c	0.8	0.9	0.8	0.8	1.0	0.9	1.0	0.9	0.8	...
MEAN*	...	0.7	0.8	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.8	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.5	2.4	2.9	3.2	3.4	3.4	3.5	3.3	3.1	2.7	2.0	...
2	...	1.9	2.4	3.2	3.2	3.2	3.6	3.5	p3.4	p3.0c	p2.6c	2.1	...
3	...	1.8	p2.1	3.0	3.3	3.5	3.5	3.3	3.3	3.0	2.6	2.2	...
4	...	1.9	2.3	3.1	3.2	3.3	3.5	p3.4c	3.3	p3.0c	2.7	2.1	...
5	...	1.0	p2.0c	2.8	3.0	3.2	3.2	3.2	3.1	3.0	2.6	2.1	...
6	...	1.4	...c	...c	...c	...c	3.3	3.2	3.6	3.0	2.6	2.1	...
7	...	1.8	2.4	2.8	3.2	3.3	3.3	3.3	3.1	3.1	2.8	2.2	...
8	...	1.8	2.5	2.9	3.1	3.3	3.4	3.3	...c	...c	...c	...c	...
9	...	1.8	2.4	2.8	3.1	3.3	3.3	3.3	3.1	2.8	3.0	1.9	...
10	...	1.7	2.5	2.8	3.0	3.2	3.2	3.3	3.2	3.0	...c	...c	...
11	...	1.3	2.3	2.8	3.0	3.2	3.3	3.1	3.3	2.9	2.7	2.2	...
12	...	1.2	2.5	2.8	3.1	3.3	3.3	3.2	3.2	2.9	2.6	2.0	...
13	...	1.3	2.4	2.7	2.9	3.3	3.4	3.3	3.1	2.7	2.0	...	...
14	...	1.6	2.3	2.7	3.1	3.1	3.4	3.1	3.0	2.9	2.4	1.9	...
15	...	1.5	2.4	2.8	3.1	3.1	3.0	3.3	3.1	3.0	2.7	2.1	...
16	...	1.9	2.4	2.8	3.1	3.2	3.3	3.3	3.2	3.0	2.5	2.4	...
17	...	1.6	2.5	2.9	3.1	3.3	3.3	3.3	3.2	3.0	2.6	1.9	...
18	...	1.9	2.5	2.8	3.1	3.2	3.4	3.3	3.1	2.8	2.7	2.1	...
19	...	1.8	2.5	2.8	3.1	3.3	3.4	3.4	3.3	3.1	2.8	2.1	...
20	...	1.8	2.5	2.8	3.1	3.1	3.3	3.1	3.1	2.7	2.7	2.4	...
21	...	1.6	2.5	p2.8c	3.2	3.3	3.2	3.3	3.3	3.2	2.8	2.1	...
22	...	1.6	2.5	...c	...c	...c	3.1	3.1	3.1	3.2	2.8	2.1	...
23	...	p1.5	p2.2c	3.0	3.3	3.4	3.5	3.5	3.4	3.1	2.8	2.1	...
24	...	1.8	p2.5	3.0	3.2	3.2	3.4	3.2	3.3	3.0	2.8	2.1	...
25	...	2.1	...c	...c	3.2	3.5	3.5	3.4	3.1	3.1	2.8	2.2	...
26	...	p1.2	...c	...c	...c	...c	...c	3.5	3.3	3.1	2.8	3.2	...
27	...	2.0	2.4	2.9	3.2	3.3	3.4	3.5	3.3	3.0	2.6	2.1	...
28	...	2.1	2.5	2.9	3.1	3.2	3.2	3.2	3.0	2.7	2.5	2.1	...
29	...	...a	2.6	2.9	3.2	3.3	3.1	3.4	3.2	3.1	2.7	2.2	...
30	...	1.7	2.6	3.5	3.2	3.4	3.2	3.3	3.1	3.0	2.3	2.1	...
31	...	...c	...c	3.1	3.3	3.4	3.4	3.4	3.1	2.5	2.8	2.2	...
MEAN*	...	1.7	2.4	2.9	3.1	3.3	3.3	3.3	3.2	3.0	2.7	2.2	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

SEPTEMBER 1941

TABLE 159

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1941

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.7	3.4	3.3	3.2	3.1	3.2	3.3	5.6	6.7	p7.1c	7.5	8.0	8.5	8.3	8.8	8.8	7.1	6.7	6.1	6.2	5.1	3.8	3.5	3.4	5.6
2	3.5	3.6	3.5	3.6	3.5	3.4	3.6	5.9	7.0	p7.5c	8.0	8.5	7.5	8.8	8.0	7.4	7.3	7.2	6.2	4.8	4.9	4.1	4.0	4.0	5.7
3	3.8	3.8	4.1	4.0	3.1	3.4	3.4	6.0	6.9	7.0	7.3	7.2	7.8	8.0	8.0	7.9	7.3	6.9	6.5	4.8	4.5	4.0	4.8	3.6	5.6
4	3.8	3.8	3.9	3.9	3.6	3.7	3.7	5.9	6.7	6.5	7.2	7.3	8.3	7.9	7.7	...c	...c	p6.7c	6.7	5.5	4.2	4.0	3.3	3.0	...
5	3.5	3.8	4.0	4.0	3.4	3.4	3.3	5.3	6.3	6.6	6.9	7.3	p7.3	7.3	p7.5	7.2	7.5	7.3	6.1	4.6	4.0	3.5	3.0	3.4	5.3
6	3.4	3.4	3.5	3.1	3.4	3.3	3.6	5.6	6.4	6.6	6.8	7.6	7.5	8.0	7.3	6.9	7.1	7.0	6.9	5.5	4.4	4.2	3.8	4.0	5.4
7	3.7	3.8	3.8	4.0	3.8	3.5	3.7	5.6	7.0	7.3	7.8	6.5	7.6	7.5	7.4	7.1	7.5	7.6	7.6	7.1	5.7	4.5	3.7	3.9	5.7
8	4.0	4.2	5.0	...c	...c	...c	...c	...c	...c	7.8	8.2	7.4	8.4	8.2	8.6	8.2	7.4	7.0	7.0	5.8	4.3	3.7	3.8	3.8	...
9	4.0	4.3	4.3	3.9	3.5	4.2	3.8	6.5	6.1	7.4	8.2	7.9	9.2	9.1	8.2	9.1	7.5	7.0	6.4	6.5	5.2	3.8	3.9	4.0	6.0
10	4.0	4.0	4.2	4.2	4.0	4.0	4.3	6.2	7.2	7.1	7.6	8.3	8.4	9.1	8.0	8.4	8.0	7.2	7.0	5.6	4.6	4.3	3.8	4.0	6.0
11	3.9	4.2	4.2	4.2	3.8	3.1	4.0	5.6	6.9	7.5	7.8	7.6	9.0	9.2	8.6	8.2	7.1	7.2	6.5	5.4	4.4	4.2	4.0	4.0	5.9
12	4.1	4.2	4.0	3.9	3.3	3.3	3.6	6.2	7.4	7.5	7.4	7.5	8.5	8.1	8.2	8.1	7.5	7.6	6.6	4.8	4.2	4.3	4.1	4.2	5.8
13	4.2	4.0	4.0	4.0	3.9	3.7	4.0	5.9	7.1	7.8	7.2	p8.2	8.1	8.4	8.0	8.2	6.9	6.6	6.2	5.6	5.2	5.0	4.7	4.5	5.9
14	4.5	4.8	4.8	3.8	2.6	3.0	3.5	5.5	6.8	7.2	7.4	8.5	8.4	7.4	7.0	6.7	7.2	7.6	6.9	5.8	5.1	4.9	3.8	3.8	5.7
15	3.9	4.1	4.3	4.2	3.0	2.8	p3.1	p5.5	p6.5c	7.6	p7.4	7.4	8.2	8.3	7.7	8.2	7.7	7.1	6.8	6.1	5.0	4.7	4.5	4.4	5.8
16	4.6	4.6	4.0	3.5	3.0	3.2	3.6	5.5	...c	...c	6.2	6.5	8.4	...c	...c	7.5	7.2	6.5	6.0	5.2	5.4	5.0	4.7	4.4	...
17	4.1	4.0	3.7	3.2	3.1	3.2	3.5	5.5	6.6	7.0	...c	...c	...c	...c	7.8	7.5	7.3	7.7	7.2	6.8	5.9	5.8	5.4	4.4	...
18	4.3	4.0	4.4	4.4	p4.2	3.9	...c	...c	...c	6.5	7.1	7.7	7.7	6.4	p7.0c	7.6	8.3	8.3	8.0	8.5	8.5	5.4	5.1	2.9	...
19	2.5	2.1	2.3	...f	...f	p2.3	3.2	...c	...g	...g	...g	...g	...g	...g	...g	...g	4.2	4.2	4.2	4.9	5.0	3.0	2.6	1.9	...
20	1.8	1.6	2.0	...c	...c	...c	...c	...c	...g	...g	...g	...b	6.4	7.0	6.7	7.0	6.3	5.8	5.6	5.5	4.9	4.8	...c	...c	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.1	6.4	p6.8b	7.3	7.5	7.5	7.5	7.7	...c	...c	...c	5.0	4.8	4.3	3.8	...
22	3.0	3.0	2.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.4	5.9	5.4	4.7	4.2	4.2	4.8	...
23	3.8	4.0	3.7	2.8	2.4	2.6	4.0	5.8	6.4	6.3	...c	...c	8.2	7.9	7.5	7.7	7.6	6.4	6.8	6.3	5.3	4.7	4.5	4.3	...
24	4.4	3.9	3.7	3.7	3.0	2.6	3.8	p5.2	...c	...c	...c	...c	...c	...c	...c	7.8	7.3	7.0	7.1	6.3	5.5	4.2	4.0	4.1	...
25	4.0	3.8	3.5	3.3	3.3	3.5	3.9	6.1	6.6	6.3	7.1	8.1	8.4	8.5	7.9	7.5	7.7	7.2	6.7	5.9	4.7	4.8	4.2	4.3	5.7
26	4.1	4.3	4.0	p3.7	...c	...c	...c	...c	6.6	7.2	...c	...c	7.8	8.0	8.2	7.4	6.9	7.0	6.4	5.9	5.5	5.0	5.0	4.5	...
27	4.4	4.3	4.1	4.0	3.8	3.8	5.0	6.3	7.1	6.8	7.5	8.1	8.3	8.3	9.4	8.2	.5	8.3	7.0	7.3	6.7	5.7	5.7	5.2	6.4
28	4.7	...c	...c	...c	...c	...c	...c	...c	...c	7.3	8.7	9.3	9.2	9.0	8.6	...c	...c	8.0	7.6	7.5	6.5	5.2	4.7	4.4	...
29	4.0	4.0	4.0	4.1	4.3	4.1	5.0	6.5	7.6	7.9	8.2	9.1	8.5	8.9	9.0	9.3	9.6	9.2	7.4	6.8	5.8	5.4	4.7	4.5	6.6
30	4.5	4.3	4.3	4.2	4.3	4.2	5.0	5.7	5.9	6.5	7.1	8.6	8.5	9.0	8.7	7.6	7.5	7.4	7.5	6.8	5.9	5.8	5.1	4.8	6.2
31																									
MEAN*	3.9	3.8	3.8	3.8	3.4	3.4	3.8	5.8	6.8	7.1	7.5	7.8	8.1	8.2	8.0	7.8	7.4	7.1	6.6	6.0	5.2	4.6	4.2	4.0	5.8

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 160

SEPTEMBER 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1941

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	240	240	260	280	260	265	230	225	p255	285	270	260	290	265	255	245	220	225	225	210	240	240	260	250
2	245	260	255	225	265	240	260	230	245	p260c	280	270	280	280	255	280	260	235	210	225	230	240	230	250	250
3	250	255	240	220	200	245	250	240	235	250	255	265	280	285	270	265	265	250	220	215	230	230	225	235	245
4	240	260	270	220	240	270	p250a	230	230	215	275	250	270	270	265	...c	...c	p245c	225	205	230	235	235	250	...
5	255	270	250	220	230	230	230	220	230	270	285	280	p270	290	p275	275	270	235	220	210	235	245	250	270	251
6	265	230	230	225	240	240	230	225	230	260	300	280	280	260	270	255	250	230	220	210	230	245	230	250	245
7	240	235	220	220	230	250	235	225	225	250	255	260	280	300	280	275	250	225	230	230	210	220	235	270	244
8	270	265	220	...c	...c	...c	...c	...c	...c	245	290	275	290	275	260	260	250	230	230	210	200	230	255	260	...
9	240	230	235	205	235	220	230	230	215	270	265	290	260	265	270	260	245	235	230	215	205	250	230	230	240
10	235	235	230	215	235	230	240	230	245	260	280	275	275	260	275	245	240	230	220	220	210	230	240	255	242
11	260	230	240	215	230	250	250	220	230	275	265	275	265	275	270	265	235	230	220	210	235	260	250	255	246
12	245	240	230	215	250	265	255	235	240	240	260	300	275	270	275	270	240	230	215	205	230	240	240	235	246
13	250	260	265	230	250	265	275	245	240	250	270	p280	290	p270a	255	270	240	225	215	220	235	250	275	285	255
14	280	260	220	205	250	260	275	240	275	285	305	285	270	295	290	265	270	245	230	240	230	220	245	265	259
15	265	250	230	215	210	235	270	240	270	270	p265	290	295	280	290	280	250	230	240	220	230	250	280	290	256
16	255	235	210	235	310	270	280	290	...c	...c	295	340	p330	...c	...c	275	265	240	225	230	240	240	240	250	...
17	250	230	225	215	270	290	265	240	250	290	...c	...c	...c	...c	300	280	275	250	230	235	230	235	230	235	...
18	235	255	260	225	p240	240	...c	...c	...c	300	305	275	320	320	...	370	300	300	230	330	295	190	200	450	...
19	400	570	550	475	425	p240	350	...c	...	...	...	...	...	...	...	...	770	620	380	300	250	350	330	380	...
20	345	p320a	300	...c	...c	...c	...c	...	...	...	...	...	320	295	300	270	250	240	240	240	240	250	...c	...c	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	280	275	...	290	300	300	280	260	...c	...c	...c	250	250	280	230	...
22	260	270	320	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	245	230	225	235	265	250	260	...
23	215	245	220	215	240	285	245	240	265	280	...c	...c	290	280	270	285	260	230	230	220	240	265	270	280	...
24	280	290	275	250	220	270	250	p245	...c	...c	...c	...c	...c	...c	...c	275	265	240	p230a	220	225	240	275	270	...
25	260	240	235	250	290	280	250	270	280	275	340	315	305	295	295	280	255	235	230	210	245	250	265	270	267
26	270	245	240	p220	...c	...c	...c	...c	260	285	...c	...c	260	290	270	270	245	240	230	230	230	255	240	260	...
27	245	240	240	230	235	250	240	230	230	310	280	280	275	270	250	245	260	230	210	225	210	225	220	220	244
28	235	...c	...c	...c	...c	...c	...c	...c	...c	250	290	260	270	260	270	...c	...c	245	235	220	210	230	p230a	230	...
29	260	275	270	265	255	240	240	230	275	250	265	280	275	290	270	270	265	235	220	225	225	235	230	250	254
30	250	250	255	245	240	255	230	235	285	300	300	290	300	300	250	280	265	235	235	215	225	235	230	250	256
31																									
MEAN*	260	264	256	237	253	253	255	237	247	267	270	269	284	283	274	273	276	251	231	227	230	243	247	265	256

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 161

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	p4.5	4.7	4.9	4.7	4.5	4.7	4.2	3.8	...	...
2	...	...	4.0	...	4.8	4.8	4.8	4.8	4.7	4.3	3.9	...	...
3	...	...	...	4.2	4.7	4.8	4.7	4.7	4.2	4.4	4.0	...	...
4	...	...	3.9	...	4.7	4.7	4.8	p4.8a	4.7	...c	...c	...	...
5	...	...	...	4.3	4.7	4.7	p4.6c	4.6	4.5	4.5	3.4	...	...
6	...	...	...	4.4	4.8	4.7	4.7	4.6	4.5	4.3	...	...	...
7	...	...	...	4.5	4.7	4.8	4.7	4.7	4.7	4.3	4.0	...	...
8	...	...	...	4.3	4.5	4.7	4.8	4.7	4.5	4.4	3.8	...	...
9	...	...	...	4.4	4.7	4.7	4.7	4.7	4.5	4.1	3.8	...	...
10	...	...	4.0	4.3	4.7	4.7	4.7	4.8	5.0	4.4	3.9	...	...
11	...	...	...	4.5	4.7	4.7	4.7	4.8	4.6	4.3	3.9	...	...
12	...	...	4.0	4.4	4.6	4.9	p4.8	4.7	4.5	4.4	...	...	...
13	...	...	...	4.6	4.8	p4.8	...a	...a	4.8	4.4	4.0	...	...
14	...	...	4.3	4.5	4.7	4.6	4.7	4.8	4.6	4.2	4.0	...	...
15	...	...	...	4.5	4.5	4.8	4.8	4.9	4.8	4.8	4.2	...	...
16	...	...	...	...c	4.7	5.0	p4.8	...c	...c	4.6	4.0	...	...
17	...	...	4.1	4.5	...c	...c	...c	...c	4.8	4.5	4.3	...	...
18	...	...	...	4.8	4.9	5.0	4.9	4.8	...	4.8	3.4	3.7	...
19	...	...	3.5	p3.7	...	...	4.1	4.0	4.1	4.0	3.6	3.5	...
20	...	...	3.9	4.2	4.5	...	4.8	4.6	4.6	4.5	4.0	...	...
21	...	...	...	4.6	4.8	...	5.0	4.8	4.8	4.5	4.3	...	...
22	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
23	...	...	4.3	4.5	...c	...c	5.0	4.9	4.7	4.6	4.0	...	...
24	...	...	...	...c	...c	...c	...c	...c	...c	4.5	3.8	...	...
25	...	...	4.2	4.5	4.5	5.1	4.7	4.8	4.7	4.5	4.2	...	...
26	...	..	4.2	4.7	...c	...c	4.9	4.9	4.7	4.7	4.0	...	...
27	...	...	...	4.7	...c	...c	5.0	4.7	...c	...c	...c	...	...
28	...	...	...c	4.6	4.8	4.9	5.0	4.8	4.8	...c	...c	...	...
29	...	...	4.5	4.5	4.7	4.6	5.0	5.2	4.8	4.5	4.0	...	...
30	...	...	4.3	4.8	5.0	4.8	4.9	4.7	4.6	4.6	4.0	...	...
31													
MEAN*	...	...	4.1	4.5	4.7	4.8	4.8	4.7	4.6	4.4	3.9	3.6	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	p200	215	230	200	220	200	215	200	...	...
2	...	...	225	...	225	220	200	190	200	195	225	...	...
3	...	...	...	210	200	200	200	210	200	260	215	...	...
4	...	...	225	...	220	p210a	200	p190a	185	...c	...c	...	...
5	...	...	...	200	225	200	p200c	200	190	190	180	...	...
6	...	...	...	220	200	200	200	200	200	200	...	...	...
7	...	...	...	195	220	205	190	200	210	215	225	...	...
8	...	...	...	215	195	220	230	230	225	225	200	...	...
9	...	...	...	220	220	210	200	210	200	200	220	...	...
10	...	...	225	200	200	225	190	185	210	205	220	...	...
11	...	...	...	225	240	220	200	p205	210	210	205	...	...
12	...	...	230	230	215	205	p200	200	215	220	...	...	...
13	...	...	...	240	225	p205	...a	...a	240	220	225	...	...
14	...	...	240	225	220	220	p220a	215	220	p215a	215	...	...
15	...	...	...	225	225	200	215	220	200	215	215	...	...
16	...	...	...	...c	210	200	p205	...c	...c	225	240	...	...
17	...	...	225	230	...c	...c	...c	...c	200	200	230	...	...
18	...	...	...	200	210	...	...	220	...	245	245	250	...
19	...	...	...	250	...	...	235	325	...	250	245	320	...
20	...	...	250	230	210	...	...a	...	220	...	240	...	...
21	...	...	...	200	...a	...	225	210	225	235	245	...	...
22	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
23	...	...	215	215	...c	...c	240	215	205	210	215	...	...
24	...	...	...	...c	...c	...c	...c	...c	...c	200	215	...	...
25	...	...	215	215	210	200	190	190	190	225	215	...	...
26	...	...	225	...c	...c	...c	220	200	210	210	205	...	...
27	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
28	...	...	...	200	...c	...c	210	200	210	...c	...c	...	...
29	...	...	225	200	190	200	210	220	240	240	195	...	...
30	...	...	220	200	200	200	230	200	230	235	225	...	...
31													
MEAN*	...	...	227	215	213	209	209	211	210	218	219	285	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 162

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1941 SEPTEMBER 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.9	1.0	p1.0	1.1	1.0	1.1	1.0	1.0	1.1	0.8	1.0	...e
2	...e	0.8	0.7	...	1.0	1.0	1.1	1.0	0.8	0.8	0.8	0.8	...e
3	...e	0.9	1.0	1.1	1.0	1.0	1.1	1.1	1.0	1.0	0.8	0.8	...e
4	...e	0.8	0.8	0.8	1.1	1.0	1.0	1.1	1.0	...c	...c	p0.8	0.8
5	...e	0.8	1.0	0.8	0.8	1.0	p1.1c	1.2	1.1	1.1	0.8	0.9	0.8
6	...e	0.8	0.8	1.0	0.9	0.8	1.0	1.1	1.1	1.0	1.0	0.8	...e
7	...e	0.8	0.8	1.0	1.0	1.1	1.1	1.1	0.8	0.9	0.9	0.8	0.8
8	...e	...c	...c	0.9	0.9	1.0	1.1	1.1	0.9	0.9	0.8	1.0	0.8
9	...e	0.7	0.8	0.8	0.8	1.0	1.2	1.0	1.0	0.8	0.8	0.8	0.8
10	...e	0.6	0.8	1.0	1.0	1.1	1.2	1.0	1.0	0.9	0.8	0.8	0.8
11	...e	0.6	0.8	1.0	1.0	1.0	1.1	1.1	1.1	1.2	0.8	0.8	0.7
12	0.7	0.8	0.8	1.1	1.1	1.2	p1.2	1.2	1.1	1.0	1.0	0.8	0.8
13	...e	0.8	0.8	1.0	1.8	p1.2	1.2	1.1	0.9	1.0	1.0	0.8	0.7
14	0.6	0.8	0.8	1.0	1.1	1.1	1.1	1.0	1.0	1.1	0.9	0.8	0.8
15	...e	0.8	1.1	1.1	1.0	1.1	1.2	1.2	2.0	1.8	1.0	1.0	0.8
16	0.7	1.0	...c	...c	1.1	1.2	1.8	...c	...c	1.7	1.1	0.8	...e
17	...e	0.8	1.0	1.1	...c	...c	...c	...c	1.8	1.0	1.3	1.0	...e
18	...c	...c	...c	1.3	1.8	...c	1.2	2.1	...c	1.8	1.7	0.8	0.8
19	0.6	...c	1.2	1.1	...c	2.1	1.2	1.7	1.8	1.0	0.9	0.8	0.9
20	...c	...c	1.0	0.9	1.8	...	3.7	2.1	2.0	1.1	0.8	0.8	...e
21	...c	...c	...c	1.0	2.0	...	1.9	1.0	1.1	1.1	0.8	...c	...c
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	1.0	0.8
23	0.6	0.8	0.8	1.1	...c	...c	...	1.8	1.2	1.1	1.0	0.9	0.8
24	0.6	p0.9	...c	...c	...c	...c	...c	...c	...c	0.9	1.0	0.8	...e
25	0.8	0.8	1.0	1.0	0.9	1.0	1.1	0.9	1.0	0.8	0.8	0.8	0.7
26	...c	...c	1.0	...c	...c	...c	0.8	0.8	0.9	0.8	0.7	0.7	0.8
27	0.8	1.0	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
28	...q	...c	...c	...c	...c	...c	...c	0.8	0.9	...c	...c	0.8	0.7
29	...e	0.8	0.6	1.0	1.0	0.9	0.9	1.0	1.0	0.8	0.7	0.7	...e
30	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.6	0.6
31													
MEAN*	0.6	0.8	0.9	1.0	1.2	1.1	1.3	1.2	1.2	1.1	0.9	0.9	0.7

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.9	2.8	p3.1	3.3	3.4	3.4	3.4	3.1	2.8	2.8	2.1	...
2	...	2.1	2.7	p3.0c	3.3	3.4	3.4	3.3	3.2	3.1	2.8	2.2	...
3	...	2.2	2.5	2.8	3.0	3.2	3.7	3.5	3.2	3.1	2.9	1.7	...
4	...	2.2	p2.5a	2.9	3.2	3.3	3.5	3.4	3.2	...c	...c	p2.2	...
5	1.1	1.8	2.5	2.9	...	3.3	p3.2c	3.2	3.2	3.1	2.7	2.3	...
6	...	2.1	2.8	3.0	3.3	3.4	3.3	3.4	3.3	3.1	2.7	2.1	...
7	...	2.0	2.6	3.0	3.3	3.4	3.5	3.4	3.3	3.2	2.8	2.2	1.1
8	...	...c	...c	3.0	3.3	3.3	3.5	p3.5	3.4	3.1	2.6	2.1	1.3
9	...	1.9	2.6	3.1	3.3	3.4	3.4	3.3	3.1	2.9	2.7	2.1	1.4
10	1.2	2.1	2.7	3.1	3.3	3.3	3.3	3.2	3.4	3.1	2.8	2.2	1.4
11	...	2.2	2.8	3.3	3.5	3.3	p3.5	3.2	p3.5	3.1	2.5	2.2	1.0
12	1.2	2.1	2.8	3.1	3.3	3.2	p3.1	3.3	3.1	3.1	2.8	2.3	1.4
13	1.1	2.0	2.7	3.2	3.3	p3.6	3.5	3.5	3.3	2.9	2.5	2.3	1.5
14	1.0	2.1	2.6	3.1	p3.2	3.5	3.4	3.3	3.4	3.2	2.8	2.1	...
15	1.2	2.2	2.9	3.1	3.1	3.4	3.3	3.4	3.4	3.3	2.9	2.2	1.5
16	1.4	2.2	...c	...c	3.3	3.5	3.3	...c	...c	3.3	3.0	2.4	1.5
17	1.2	2.2	3.1	3.2	...c	...c	...c	...c	3.3	3.2	3.0	2.5	1.9
18	...c	...c	...c	3.2	3.0	...	3.3	3.4	...	3.4	2.9	2.5	1.6
19	2.2	...	2.6	3.1	...	...	3.3	3.3	3.2	3.2	2.8	2.4	2.1
20	...c	...c	3.0	3.2	3.5	...	...	3.3	3.7	3.5	3.0	2.8	...
21	...c	...c	...c	3.6	3.7	...	3.6	3.2	3.5	3.3	3.0	...c	...c
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.4	...a
23	1.8	2.4	2.9	3.2	...c	...c	3.3	3.3	3.3	3.3	2.9	2.4	...
24	1.7	p2.3	...c	...c	...c	...c	...c	...c	...c	3.2	2.8	2.2	...
25	1.3	2.3	2.9	3.3	3.4	3.5	3.5	3.5	3.4	3.2	2.7	2.1	1.5
26	...c	...c	2.8	...c	...c	...c	3.6	3.5	3.5	3.2	2.9	2.4	1.6
27	1.4	1.9	2.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
28	...c	...c	...c	...c	...c	...c	...c	3.5	3.5	...c	...c	2.4	1.6
29	1.5	2.4	2.9	3.2	3.4	3.5	3.5	3.0	3.6	3.2	2.8	2.3	1.5
30	1.2	2.3	2.8	3.1	3.3	3.1	3.5	2.8	3.4	3.2	2.8	2.2	1.5
31													
MEAN*	1.4	2.1	2.8	3.1	3.3	3.4	3.4	3.3	3.3	3.2	2.8	2.3	1.5

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F_2 EQUAL TO OR LESS THAN f^0F_1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 163

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1941 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — OCTOBER 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.5	4.5	4.5	4.2	3.7	3.7	4.9	6.3	7.6	7.6	8.0	9.0	8.7	8.6	8.1	7.6	7.5	7.4	7.0	6.7	6.2	5.2	5.0	4.3	6.3
2	4.3	4.3	4.3	4.0	4.1	4.1	5.1	6.5	7.0	7.1	7.2	7.7	8.4	8.7	7.7	7.2	7.3	7.5	7.8	7.0	5.7	4.8	4.8	4.3	6.1
3	3.9	4.0	4.2	4.1	3.5	3.6	4.8	6.7	7.3	8.5	8.7	9.3	9.7	8.8	8.4	6.9	7.1	7.3	7.3	7.0	5.9	5.3	5.3	4.9	6.4
4	4.4	4.5	4.5	4.1	4.0	4.1	5.0	6.2	6.9	p7.5c	8.0	9.0	8.6	9.0	8.4	7.4	7.5	7.4	7.0	6.8	6.5	6.0	5.7	4.8	6.4
5	4.4	4.5	4.4	4.0	3.8	3.9	5.0	6.5	7.4	7.7	7.7	9.2	9.6	9.6	9.4	8.6	8.3	8.1	8.2	7.3	6.2	5.5	5.0	4.2	6.6
6	3.9	3.9	3.9	3.7	3.6	3.7	5.2	6.9	7.1	7.8	7.7	8.8	10.1	10.2	...c	...c	...c	8.1	8.7	7.0	6.1	4.8	4.4	4.0	...
7	3.8	3.8	3.9	3.8	3.6	3.3	3.2	6.4	7.0	...c	...c	...c	...c	...c	...c	8.2	8.1	8.2	7.7	6.7	6.1	5.3	5.1	5.1	...
8	4.8	4.5	4.0	3.9	3.9	4.1	5.5	6.5	6.7	6.7	7.1	7.9	8.4	9.4	9.3	9.5	8.1	7.6	...c	...c	...c	...c	...c	4.8	...
9	...c	4.5	4.5	4.4	4.2	4.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
10	4.8	4.9	4.2	3.3	3.1	3.1	...c	...c	...c	...c	...c	...c	8.8	9.0	8.4	8.2	8.0	8.1	7.9	7.2	6.3	5.6	5.5	5.3	...
11	5.4	5.4	5.0	4.5	4.5	4.5	5.9	7.8	6.9	7.6	7.7	7.9	9.0	10.1	9.9	8.6	8.2	8.4	7.5	8.1	7.3	6.6	6.2	5.7	7.0
12	5.6	5.8	5.3	4.7	4.4	4.5	5.1	6.0	5.6	6.0	7.5	8.4	8.3	9.1	3.8	7.9	7.0	7.5	7.5	6.7	6.1	5.0	4.6	4.2	6.3
13	3.7	3.7	3.5	3.4	3.3	3.2	5.3	6.0	6.4	6.9	8.0	8.4	8.9	8.7	p8.4c	8.0	7.8	7.9	7.5	7.3	6.4	4.5	4.3	4.2	6.1
14	4.2	4.2	4.0	3.7	3.5	3.1	5.2	6.1	6.2	6.4	7.0	7.6	8.7	9.3	9.6	8.6	8.2	7.9	8.1	7.2	6.4	5.8	5.6	5.5	6.3
15	5.4	5.4	5.0	4.5	3.7	3.5	4.7	5.0	5.5	5.8	6.3	7.3	8.0	8.4	7.5	7.5	7.1	7.1	7.2	7.0	5.9	5.0	5.0	4.8	5.9
16	4.8	4.7	4.5	4.2	3.6	3.7	4.9	5.8	6.5	6.9	7.4	8.0	8.5	8.5	9.0	8.0	7.3	6.4	6.2	5.6	5.2	4.9	4.1	4.7	6.0
17	4.6	4.3	4.2	3.9	3.9	3.5	4.8	5.8	5.8	6.8	7.2	7.3	7.7	7.4	7.6	p7.4c	7.1	6.9	6.9	6.2	5.7	4.8	4.5	4.3	5.8
18	4.3	4.5	4.3	3.7	3.6	3.7	5.0	5.6	5.7	6.1	6.3	6.9	7.6	7.8	7.7	7.6	7.6	7.0	6.8	6.4	5.8	5.2	5.0	4.8	5.8
19	4.8	4.3	3.8	3.5	3.6	3.6	4.8	4.8	5.1	5.7	6.6	7.2	7.5	8.1	8.1	7.6	7.6	7.4	7.4	6.8	5.8	4.1	5.0	5.0	5.8
20	5.0	4.9	4.5	4.0	3.8	3.2	4.9	5.8	7.1	8.5	8.3	8.7	9.3	9.0	9.2	8.6	8.3	8.2	8.0	7.8	6.7	5.8	5.1	5.0	6.6
21	4.7	4.5	4.0	3.5	3.5	3.7	5.5	5.8	6.4	6.9	6.9	7.1	7.3	7.5	8.0	8.1	7.5	7.2	7.2	6.6	6.1	5.3	4.9	5.0	6.0
22	5.1	5.1	4.6	3.9	3.6	3.6	5.0	6.1	7.1	7.2	8.1	9.1	8.9	9.1	9.1	8.6	8.7	8.4	8.4	8.0	7.0	6.6	6.3	6.1	6.8
23	5.9	5.0	4.1	4.2	4.3	4.3	5.0	4.9	5.5	6.5	7.9	7.8	8.1	8.4	7.9	7.3	7.0	7.1	6.6	6.4	5.9	5.4	5.2	5.0	6.1
24	5.0	4.6	4.2	4.0	4.3	4.2	5.6	6.8	7.0	7.5	7.1	8.4	9.1	7.2	8.4	8.0	8.1	8.0	7.5	7.0	5.9	5.0	5.0	4.8	6.4
25	5.0	5.0	4.2	3.8	3.8	3.7	5.1	5.7	7.0	7.5	7.2	8.2	8.7	8.2	8.5	8.1	7.5	7.2	7.3	7.2	6.0	5.4	5.0	5.1	6.3
26	5.0	4.8	4.2	3.5	3.3	3.6	5.5	6.0	6.2	6.6	7.6	7.9	8.4	9.1	9.3	9.1	8.8	8.4	7.6	7.0	6.8	6.2	6.4	6.2	6.6
27	6.0	5.0	4.0	3.6	3.5	3.2	4.5	5.1	5.7	5.6	6.2	p7.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.0	8.7	8.6	7.7	6.4	5.5	5.2	4.8	...
29	5.0	4.5	4.3	3.5	3.5	3.7	5.1	6.3	6.2	6.3	p6.0c	p8.0c	9.0	8.1	6.8	6.5	6.4	6.4	5.9	6.1	6.2	5.8	4.8	4.6	5.8
30	4.2	4.0	3.9	3.8	3.8	3.9	5.1	5.5	6.6	8.6	7.4	7.4	7.8	8.2	8.5	7.4	7.6	7.3	6.8	6.9	6.6	6.3	6.2	5.6	6.2
31	5.8	5.0	4.1	4.0	3.8	3.8	5.5	6.7	8.2	8.1	8.6	9.1	10.0	10.6	10.9	10.7	11.0	9.0	7.4	7.7	p7.0a	6.1	5.7	6.0	7.3
MEAN*	4.7	4.6	4.3	3.9	3.8	3.7	5.1	6.1	6.6	7.1	7.4	8.1	8.6	8.7	8.6	8.0	7.8	7.6	7.4	7.0	6.2	5.4	5.2	4.9	6.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 164

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — OCTOBER 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	260	255	230	220	260	250	240	275	250	290	270	295	270	285	285	255	235	225	225	220	225	225	245	252
2	240	240	245	240	245	240	245	245	260	255	275	305	275	270	275	270	270	240	235	215	205	235	235	225	249
3	250	260	245	230	225	250	245	230	270	275	275	290	260	270	270	275	240	240	235	220	215	235	245	230	249
4	245	250	235	220	235	225	250	230	280	p285c	290	275	270	270	270	270	260	240	230	225	225	225	225	220	248
5	240	235	220	220	240	245	240	230	260	290	300	290	285	290	280	280	280	250	230	225	210	225	230	220	251
6	250	250	250	235	245	260	250	250	260	265	300	300	285	260	...c	...c	...c	240	230	220	205	225	240	245	...
7	255	265	255	230	230	260	240	255	p265	...c	...c	...c	...c	...c	...c	260	270	240	230	225	230	230	255	245	...
8	245	235	220	240	245	260	245	250	270	290	315	330	315	295	295	270	235	225	230	225	230	235	240	250	258
9	240	255	250	240	230	240	240	240	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	225	210	230	240	260	240	...
10	245	230	210	265	250	280	235	235	...c	...c	...c	...c	295	295	235	290	270	265	230	215	215	220	245	245	...
11	250	240	215	245	245	250	250	250	265	290	310	325	320	270	265	315	280	250	245	235	220	240	240	235	260
12	240	245	230	255	250	265	245	240	385	420	325	300	315	300	270	265	280	250	235	230	220	245	240	250	271
13	260	280	250	240	270	255	240	230	265	315	310	270	270	290	p295c	300	275	250	230	225	220	195	260	265	261
14	245	250	230	240	245	270	240	255	300	300	310	300	320	305	285	290	270	260	235	220	220	230	245	260	264
15	250	245	240	220	220	270	240	230	380	380	360	340	310	290	305	295	295	235	240	225	220	260	260	280	275
16	260	260	240	235	245	265	250	270	280	310	300	335	320	310	285	275	275	260	230	220	240	260	270	270	269
17	245	250	250	250	255	240	230	270	325	320	310	330	325	340	310	p315c	315	280	240	220	225	235	265	270	276
18	265	245	230	220	255	260	240	225	320	350	345	350	325	325	330	315	285	260	235	225	225	240	260	260	275
19	250	240	240	265	270	275	240	220	390	400	p335c	350	345	330	300	300	290	270	245	230	225	250	280	280	284
20	265	250	235	270	230	270	240	235	295	290	275	290	285	300	280	295	280	230	240	230	220	230	240	255	260
21	250	235	220	230	255	270	240	235	300	320	320	325	340	330	300	290	290	270	240	225	235	240	270	280	271
22	270	p250a	220	225	230	260	235	265	285	320	320	290	300	305	300	300	290	270	250	230	240	270	290	270	270
23	255	270	315	295	310	325	285	325	340	390	310	325	335	295	310	295	300	275	270	240	250	270	285	290	298
24	250	255	275	270	270	285	245	270	300	295	340	300	300	365	315	290	270	280	265	260	220	270	260	290	281
25	260	240	260	260	265	290	250	240	290	285	325	320	310	330	310	290	280	260	240	225	225	255	265	285	273
26	280	260	240	...a	...a	...a	255	260	270	315	315	320	320	315	290	275	270	255	230	235	235	255	250	260	...
27	230	240	215	280	280	290	295	360	300	370	330	295	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	275	260	235	220	220	230	255	260	...
29	240	225	225	225	255	310	270	270	310	345	325	305	285	290	285	345	290	270	240	240	240	245	270	275	274
30	280	270	265	260	250	250	255	330	310	280	285	325	325	320	290	305	290	260	235	235	260	290	275	275	280
31	255	215	220	270	280	280	235	280	260	280	275	330	295	290	295	290	240	...a	...a	270	...a	275	290	270	...
* MEAN	253	248	241	244	249	266	246	252	297	312	309	311	305	301	292	291	276	254	238	229	226	243	255	259	267

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 165

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.5	4.5	4.7	4.8	5.0	4.7	4.8	4.8	3.8	...	...
2	...	3.7	4.2	4.7	4.8	5.0	4.9	4.8	4.7	4.3	3.9	...	...
3	...	...	...	4.6	4.6	5.0	4.7	4.8	4.6	4.2	...	...	...
4	...	...	4.4	p4.5c	4.7	4.8	4.8	4.7	4.7	4.3	4.0	...	...
5	...	...	4.3	4.7	4.7	4.8	5.1	4.8	4.8	4.5	4.2	...	...
6	...	3.9	4.3	4.7	4.8	4.7	5.0	4.9	...c	...c	...c	...	...
7	...	...	4.5	...c	...c	...c	...c	...c	...c	4.3	4.2	...	...
8	...	3.9	4.2	4.8	4.7	5.0	5.0	5.0	4.8	...	...	...	...
9	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...
10	...	...	...c	...c	...c	...c	4.9	4.8	4.8	4.8	4.3	3.7	...
11	...	3.8	4.3	4.7	4.9	5.0	4.9	5.0	4.7	4.8	4.3	...	...
12	...	...	4.5	4.7	4.7	4.8	4.7	5.0	4.8	4.4	4.4	3.4	...
13	...	...	4.2	4.9	4.9	4.9	4.8	4.9	p4.8c	4.7	4.3	3.5	...
14	...	3.8	4.5	4.7	4.8	4.8	5.0	4.8	4.8	4.7	4.2	3.6	...
15	...	...	4.3	4.5	4.5	4.7	4.8	4.8	4.7	4.3	4.3	...	...
16	...	...	4.3	4.8	4.8	5.0	4.9	4.9	4.7	4.5	4.2	3.6	...
17	...	3.8	4.5	4.7	4.7	4.8	4.8	4.9	4.8	p4.6c	4.3	3.7	...
18	...	...	4.5	4.6	4.7	4.9	4.8	5.0	4.8	4.6	4.2	3.5	...
19	...	...	4.5	4.5	p4.6c	4.9	5.0	4.8	4.6	4.8	4.5	3.5	...
20	...	...	4.5	4.7	4.8	4.7	4.8	4.8	4.8	4.7	4.2	...	...
21	...	...	4.5	4.6	4.7	4.8	4.9	5.0	4.7	4.5	4.3	...	...
22	...	4.0	4.4	5.0	4.8	4.7	4.9	4.9	4.8	4.6	4.4	3.7	...
23	3.2	4.2	4.4	4.8	4.9	4.6	4.9	4.8	4.8	4.6	4.2	4.0	...
24	...	4.1	4.4	4.6	4.8	...a	...a	5.2	4.7	4.5	4.2	...a	...
25	...	...	4.3	4.6	5.2	4.9	4.9	5.0	4.8	4.6	4.3	3.7	...
26	...	...	4.5	4.8	4.8	p4.8a	4.9	4.8	p4.7a	4.6	p4.0a	3.6	...
27	...	4.0	4.4	4.6	4.6	4.8	...c	...c	...c	...c	...c	...c	...
28	...	...	...c	...c	...c	...c	...c	...c	...c	...c	4.5	3.8	...
29	...	4.1	4.3	4.6	p4.6c	p4.7c	4.7	4.6	4.5	4.4	4.2	3.8	...
30	...	4.2	p4.3a	4.6	p4.6a	4.7	4.8	4.8	4.7	4.5	4.3	3.7	...
31	...	4.4	4.4	4.7	4.8	5.0	4.9	4.6	4.8	4.7	4.2	...a	...
*MEAN	3.2	4.0	4.4	4.7	4.8	4.8	4.9	4.9	4.7	4.6	4.2	3.6	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	240	220	215	205	225	220	210	210	215	...	...
2	...	230	210	200	190	195	200	220	210	200	240	...	...
3	...	...	...	200	190	185	190	200	195	200	...	...	...
4	...	...	210	p205c	205	210	195	180	215	210	230	...	...
5	...	...	220	215	200	200	215	200	240	220	235	...	...
6	...	240	230	220	220	210	190	220	...c	...c	...c	...	...
7	...	...	230	...c	...c	...c	...c	...c	...c	215	220	...	...
8	...	230	220	200	200	195	200	205	230	220	...	...	...
9	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...
10	...	...	...	...	...	...	190	220	200	225	220	220	...
11	...	240	225	215	215	195	200	200	200	210	210	...	...
12	...	...	235	270	...a	...a	...a	220	215	210	210	220	...
13	...	...	200	205	210	215	190	190	p200c	215	205	230	...
14	...	220	200	195	200	195	195	190	200	210	220	235	...
15	...	...	200	200	205	200	215	210	225	205	215	...	...
16	...	...	210	200	200	195	215	230	225	210	215	220	...
17	...	230	220	200	200	200	195	200	200	p210c	220	240	...
18	...	...	200	210	200	200	200	215	210	220	225	230	...
19	...	...	220	210	p200c	225	205	215	210	220	230	230	...
20	...	...	220	225	200	195	230	235	210	200	210	...	...
21	...	...	210	225	230	200	200	200	210	230	230	...	...
22	...	230	200	225	215	220	210	205	210	215	230	235	...
23	260	235	225	265	p240a	220	250	230	225	205	240	250	...
24	...	235	230	p230a	225	...a	...a	...a	215	210	240	...a	...
25	...	...	225	225	200	215	205	p210a	p220a	225	230	235	...
26	...	...	210	235	...a	...a	...a	...a	...a	220	...a	235	...
27	...	240	220	220	210	...a	...c	...c	...c	...c	...c	...c	...
28	...	...	...c	...c	...c	...c	...c	...c	...c	...c	215	230	...
29	...	230	240	240	...c	...c	...a	p220	...a	...a	220	235	...
30	...	240	...a	...a	...a	...a	...a	220	235	220	220	220	...
31	...	220	220	p230	p220	215	200	p210	235	245	220	...a	...
*MEAN	260	232	218	219	208	204	205	211	214	215	223	231	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 166

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1941 OCTOBER 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.6	0.7	0.8	0.9	1.0	0.8	1.0	0.7	0.8	0.8	0.7	...e
2	0.8	0.7	0.7	0.7	0.9	0.9	1.0	0.9	1.0	0.8	0.9	0.8	...e
3	0.7	0.7	0.8	0.8	0.8	0.8	0.9	1.1	0.8	0.8	0.6	...e	...e
4	...e	0.7	0.7	p0.8c	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.7
5	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.0	0.9	0.7	0.6	...e
6	0.7	0.8	0.8	1.0	1.0	1.0	1.0	1.0	...c	...c	...c	0.7	0.6
7	...e	0.8	...c	...c	...c	...c	...c	...c	...c	0.8	0.8	0.6	...e
8	0.8	0.7	0.8	0.9	1.0	0.9	1.0	1.0	0.9	0.9	0.8	0.8	...
9	0.8	0.7	0.8	...c	...c	...c	...c	...c	...c	...c	...c	0.7	0.7
10	...e	0.7	0.9	...c	...c	...c	1.2	1.1	1.0	1.0	0.7	0.7	0.6
11	0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.0	0.9	0.8	0.7	...e
12	0.7	0.8	0.8	0.8	0.8	1.0	1.1	1.0	0.9	0.8	0.8	0.8	0.8
13	...e	...e	...e	0.8	1.0	0.8	0.8	1.0	p0.9c	0.8	0.8	0.8	0.8
14	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.5	0.5	0.8
15	0.8	0.7	0.8	0.8	0.9	0.9	1.1	1.0	1.0	0.8	0.7	0.8	0.8
16	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.9
17	0.8	0.8	1.1	1.1	1.2	1.2	1.2	1.1	1.1	p0.9c	0.7	0.7	0.7
18	0.8	0.8	1.0	0.8	1.0	1.0	0.9	1.0	1.0	0.9	0.9	0.7	0.7
19	0.8	0.7	0.7	0.8	1.0	0.8	1.1	0.8	0.9	1.0	0.8	0.7	0.6
20	0.7	0.7	1.0	1.0	1.0	1.0	1.0	0.7	1.0	0.9	0.7	0.7	0.6
21	0.7	0.7	0.7	0.8	1.0	1.0	1.0	1.0	0.8	0.9	0.8	0.7	0.7
22	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.1	1.0	0.9	0.9	0.7	0.6
23	0.6	0.8	0.8	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6
24	0.8	0.7	0.9	1.0	1.1	1.3	1.1	1.1	1.0	1.0	0.9	1.0	0.8
25	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.8	0.7	0.8
26	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.1	1.0	1.0	0.8	0.8	0.8
27	0.8	0.8	1.0	1.1	1.0	1.0	...c	...c	...c	...c	...c	...c	...c
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	1.0	0.8	0.7
29	0.8	0.8	0.8	1.0	p1.0c	p1.0c	1.1	1.0	1.0	0.8	0.8	0.7	0.9
30	0.8	0.8	0.8	1.1	1.0	1.0	1.1	1.0	1.0	1.0	0.8	0.7	0.7
31	0.7	0.8	0.8	1.1	1.1	1.2	1.0	1.1	1.0	0.9	0.9	0.8	0.7
* MEAN	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.3	2.2	2.7	3.0	3.2	3.3	3.5	3.5	3.4	3.2	2.9	2.3	...
2	1.4	2.4	2.8	3.1	3.2	3.4	3.6	3.5	3.5	3.3	2.9	2.3	1.6
3	1.2	2.3	2.7	3.1	3.3	3.5	3.5	3.6	3.4	3.2	2.9	2.2	1.5
4	1.1	2.5	2.9	p3.1c	3.3	3.4	3.5	3.5	3.4	3.2	2.9	2.3	1.5
5	1.5	2.5	2.9	3.0	3.2	3.4	3.5	3.6	3.5	3.3	3.0	2.1	1.2
6	1.8	2.5	3.0	3.2	3.3	3.4	3.3	3.5	...c	...c	...c	2.3	1.5
7	1.9	2.4	3.3	...c	...c	...c	...c	...c	...c	3.3	3.0	2.4	1.5
8	2.0	2.3	3.0	3.2	3.5	3.6	3.6	3.4	3.5	3.3	3.0	2.4	...
9	1.6	2.6	3.2	...c	...c	...c	...c	...c	...c	...c	...c	2.4	1.6
10	2.1	2.4	3.3	3.0	...c	...c	3.5	3.5	3.5	3.3	3.0	2.4	1.2
11	1.6	2.5	2.9	3.2	3.4	3.5	3.5	3.6	3.4	3.3	3.0	2.4	1.3
12	1.0	2.5	2.9	3.1	3.3	3.5	3.5	3.1	3.2	3.3	2.9	2.4	1.6
13	1.9	2.5	2.8	3.2	3.3	3.3	3.5	3.6	p3.4c	3.2	2.9	2.5	1.8
14	2.0	2.5	2.9	3.1	3.3	3.3	3.3	3.3	3.4	3.4	2.9	2.4	1.5
15	1.9	2.2	2.7	3.3	3.3	3.4	3.6	3.5	3.1	3.1	2.8	2.4	1.5
16	1.8	2.5	2.8	3.2	3.3	3.2	3.6	3.1	2.7	3.2	2.9	2.4	1.4
17	1.6	2.4	2.9	3.2	3.6	3.0	3.2	3.2	3.1	p3.0c	2.9	2.4	...h
18	1.7	2.5	3.0	3.3	3.4	3.4	p3.2	3.1	3.3	3.2	2.9	2.5	1.4
19	1.7	2.6	3.0	3.3	p3.3c	3.3	3.5	3.2	3.2	3.4	3.0	2.3	1.4
20	1.7	2.5	3.0	3.3	3.1	3.3	3.3	3.5	3.3	3.1	3.0	2.3	1.9
21	1.8	2.5	2.9	3.3	3.3	3.4	3.4	3.4	3.3	3.1	2.8	2.2	1.7
22	1.9	2.5	3.0	3.2	3.4	3.7	3.5	3.4	3.2	3.2	3.0	2.4	1.8
23	2.2	2.5	3.0	3.2	3.5	3.4	3.5	3.7	3.3	3.3	3.1	2.5	1.8
24	2.1	2.7	3.0	3.2	3.4	3.5	3.6	3.5	3.3	3.2	2.9	2.5	2.1
25	2.1	2.5	3.1	3.4	3.5	3.6	3.6	3.4	3.5	3.3	3.0	2.5	1.8
26	...a	...a	3.0	3.2	3.4	3.5	3.6	3.6	3.4	3.2	2.9	2.5	1.7
27	2.1	2.6	3.0	3.2	3.6	3.5	...c	...c	...c	...c	...c	...c	...c
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	3.0	2.5	1.8
29	2.1	2.6	2.9	3.2	p3.3e	p3.4c	3.5	3.5	3.4	3.2	2.8	2.6	1.5
30	1.9	2.5	3.0	3.3	3.4	3.5	3.3	3.5	3.4	3.3	2.9	2.5	1.9
31	1.8	2.5	3.0	3.3	3.4	3.4	3.3	3.3	3.2	3.2	2.6	...a	...a
* MEAN	1.7	2.5	2.9	3.2	3.3	3.4	3.5	3.4	3.3	3.2	2.9	2.4	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 167

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1941 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — NOVEMBER 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.8	4.7	4.5	4.4	3.7	3.2	3.6	4.2	4.5	...c	...a	...a	...a	...a	...a	...a	...a	4.3	4.9	4.4	4.6	4.8	4.6	p4.5a	...
2	4.4	3.9	4.0	3.6	2.7	3.0	4.0	4.8	5.1	6.1	6.6	6.4	7.0	6.5	6.8	6.6	6.7	6.2	6.2	6.1	6.1	5.6	5.4	5.0	5.4
3	4.8	4.3	3.5	3.2	2.9	3.2	4.7	5.1	5.2	5.3	6.7	7.9	8.2	8.3	7.3	7.0	7.3	7.1	6.9	6.6	p5.8	5.5	5.6	5.3	5.8
4	5.5	4.8	4.6	3.5	3.0	3.7	5.6	7.0	8.4	10.5	11.1	11.1	10.4	11.0	10.3	9.9	8.7	7.9	7.6	7.1	6.1	5.6	5.3	5.4	7.3
5	5.2	3.9	3.8	3.7	3.3	3.5	4.1	4.7	5.0	...c	...c	...c	5.8	...c	...c	...c	...c	...c	6.0	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.3c	7.0	7.2	6.9	6.0	5.1	4.9	5.0	5.0	...
7	4.9	4.8	4.3	3.7	3.3	3.6	4.2	4.1	...a	4.7	...a	...a	...c	4.7	...c	5.2	5.1	5.5	5.2	5.2	5.5	5.2	4.8	4.5	...
8	4.6	3.6	3.3	3.0	3.1	3.5	4.7	4.8	5.1	5.3	5.8	7.0	8.0	8.2	9.2	8.0	7.6	7.0	6.4	6.6	6.0	5.7	5.8	5.5	5.7
9	5.1	5.4	4.6	4.2	3.9	3.9	4.8	5.5	7.1	6.6	7.9	8.9	9.5	8.6	8.5	7.6	7.2	7.1	7.0	7.0	6.6	6.0	5.6	5.8	6.4
10	5.7	5.6	4.4	3.0	2.7	3.2	4.7	5.8	6.4	7.2	8.0	7.7	8.6	8.8	9.0	8.7	8.6	7.5	7.4	7.3	6.2	5.9	5.5	5.9	6.4
11	5.6	5.7	4.2	3.8	3.6	3.9	5.3	5.8	6.1	6.6	8.5	9.5	9.9	10.1	9.2	7.2	6.4	6.0	6.7	7.8	6.6	5.7	4.9	4.8	6.4
12	4.7	4.0	3.6	3.2	3.2	3.7	5.0	5.4	6.0	6.8	8.0	8.0	8.1	8.4	7.8	...c	...c	7.7	7.7	p7.4	5.9	5.2	4.7	4.5	...
13	4.9	4.8	4.4	3.7	3.5	4.2	5.2	5.6	5.5	p6.2a	7.2	p7.8c	8.5	8.5	8.7	p8.2c	7.7	7.0	7.3	p7.1c	6.9	...c	...c	5.8	...
14	5.7	5.8	5.0	4.7	4.5	4.2	4.5	5.2	5.8	6.9	6.4	8.1	8.6	9.6	8.5	8.8	9.2	8.8	9.3	8.3	6.7	5.8	5.3	5.1	6.6
15	4.6	4.5	4.0	3.8	3.7	4.0	5.0	5.5	5.8	5.9	6.4	6.5	6.7	6.8	7.1	7.1	7.3	7.7	7.8	7.3	6.4	5.7	5.5	5.2	5.8
16	5.2	5.0	4.5	3.6	3.6	4.0	5.1	5.7	6.6	p7.2c	7.9	8.3	8.7	9.0	9.7	9.1	9.9	9.0	8.2	7.0	6.6	6.3	5.9	5.7	6.7
17	5.8	5.2	4.5	4.0	3.6	4.0	5.2	6.6	7.0	8.0	8.7	8.5	9.3	8.3	9.3	...c	...c	8.9	8.3	7.0	6.8	5.6	5.7	5.6	...
18	5.5	5.1	4.8	4.1	4.2	3.5	4.0	4.3	4.9	5.1	p5.2c	5.2	p5.6	5.5	p5.6a	5.8	5.9	5.6	6.0	5.9	5.2	5.0	5.2	5.2	5.1
19	4.8	4.4	3.6	3.4	3.4	3.2	4.1	4.7	4.8	5.3	5.7	6.5	7.3	7.0	5.8	6.0	6.0	5.7	5.9	6.3	5.9	5.3	4.9	4.6	5.2
20	4.4	4.3	3.9	3.9	3.6	3.9	5.4	6.1	7.3	7.8	9.2	8.5	9.5	10.1	9.6	9.7	9.4	8.7	8.0	7.9	6.2	5.7	5.3	p5.0f	6.8
21	5.8	5.5	5.3	4.7	4.0	4.0	5.0	5.0	5.4	p6.0a	6.6	7.9	8.5	8.7	8.5	7.3	p7.0a	6.7	6.8	7.0	6.6	5.5	4.9	5.1	6.2
22	5.0	p4.6f	4.3	4.1	3.5	4.0	5.4	5.9	6.0	6.7	7.0	8.1	8.8	9.0	9.3	8.0	7.7	8.1	8.6	8.2	7.8	7.3	6.3	6.0	6.6
23	6.0	5.8	5.4	4.3	4.1	4.0	4.5	5.3	5.3	5.9	7.2	7.8	9.1	9.9	9.4	8.7	7.8	7.2	7.5	7.5	6.8	6.1	6.2	6.0	6.6
24	6.1	5.7	4.9	3.9	3.5	4.2	5.8	6.3	6.3	7.4	7.5	8.4	9.8	9.8	9.8	10.0	9.5	8.6	7.8	7.6	6.8	6.3	6.1	6.1	7.0
25	5.5	5.0	4.9	4.8	4.3	4.3	5.2	5.9	6.2	6.5	7.3	8.0	...a	...a	8.6	8.6	8.4	8.0	7.2	7.3	6.8	6.1	6.2	6.3	...
26	...f	6.0	...f	...f	4.2	4.2	5.2	5.9	5.9	6.9	...a	...a	...a	...a	...a	...a	8.9	8.6	8.3	8.1	7.6	7.2	7.0	7.2	...
27	7.3	7.0	6.5	5.8	5.4	5.2	5.9	6.6	6.8	6.9	7.5	8.5	8.7	9.1	9.3	9.1	9.2	9.2	8.8	8.7	7.7	7.4	6.6	6.4	7.5
28	6.2	6.0	6.0	5.5	4.9	5.0	6.3	7.0	7.7	7.9	8.6	9.7	10.9	11.8	12.0	11.7	10.2	9.8	8.7	6.5	6.1	5.7	4.9	...f	...
29	...f	...f	4.6	...f	2.9	3.8	4.0	4.5	...a	...a	...a	...a	...a	...a	5.8	6.0	6.1	5.8	6.6	6.9	6.7	7.0	6.3	6.0	...
30	5.8	5.7	4.7	4.2	3.8	3.6	5.3	5.4	5.8	6.0	6.6	7.1	7.6	p7.7a	7.7	8.2	8.0	8.0	8.0	7.9	7.1	6.5	6.6	6.5	6.4
31																									
MEAN*	5.4	5.0	4.5	4.0	3.7	3.8	4.9	5.5	6.0	6.6	7.4	8.0	8.5	8.6	8.5	8.0	7.8	7.4	7.3	7.0	6.4	5.9	5.6	5.5	6.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = $f^{o}F2$ EQUAL TO OR LESS THAN $f^{o}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 188

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1941 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — NOVEMBER 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	240	275	290	290	300	330	530	...a	...a	...c	...a	...a	...a	...a	...a	...a	...a	485	280	275	245	280	295	...a	...
2	...a	330	290	230	275	275	265	250	p280	330	310	340	320	325	320	320	285	270	255	240	235	240	265	265	...
3	250	225	290	p290a	285	265	250	275	...a	395	355	325	305	290	300	330	295	270	240	235	235	260	270	295	...
4	295	265	235	270	240	280	240	280	335	300	275	270	280	280	265	280	265	260	250	225	230	270	285	250	268
5	240	280	265	290	295	280	330	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	p325	320	280	235	235	280	290	290	295	...
7	290	280	295	330	335	300	...a	...a	...a	...a	...a	...a	...c	...a	...c	420	...a	330	260	245	300	...a	275	275	...
8	250	240	275	300	320	280	250	...a	390	...a	440	370	355	340	290	290	275	260	260	240	245	270	290	290	...
9	305	265	245	245	260	255	230	330	280	315	315	300	280	285	280	285	270	260	230	240	255	260	285	270	273
10	280	230	215	220	275	260	240	280	320	305	285	330	300	300	290	280	275	255	250	230	p260a	290	275	290	272
11	250	225	250	280	300	370	260	300	270	345	350	320	310	310	275	275	275	270	260	250	225	240	p260a	275	281
12	285	255	235	295	325	260	240	225	295	370	310	280	310	300	300	...c	...c	275	240	220	230	250	275	285	...
13	260	240	p235a	230	p235a	240	240	260	290	p385	340	p325c	310	315	295	p290c	280	290	240	p240c	235	p240c	p250c	265	272
14	260	275	250	255	255	270	230	285	300	270	370	300	305	290	300	295	285	260	245	225	215	255	290	260	273
15	260	250	...a	...a	...a	...a	...a	310	320	330	320	335	320	340	305	300	295	270	250	230	215	240	245	270	...
16	265	230	220	230	250	245	235	p250c	285	p295c	305	325	p320a	310	300	280	270	250	235	215	230	245	240	250	262
17	240	230	p230a	235	220	230	240	275	340	320	320	345	310	335	315	...c	...c	270	250	215	250	250	270	305	...
18	290	270	250	285	240	275	260	470	440	460	...c	525	p420a	...a	...a	380	330	340	265	255	255	280	280	265	...
19	265	310	310	260	330	410	305	420	495	490	445	405	335	330	400	385	325	320	...a	260	220	240	255	280	...
20	310	270	250	260	260	280	300	295	300	325	280	330	330	280	315	300	280	250	260	235	245	265	320	p295f	285
21	270	265	240	250	265	275	285	375	...a	...a	...a	350	310	310	295	305	...a	280	270	245	235	245	275	300	...
22	335	p290f	240	250	250	255	260	280	360	...a	...a	325	...a	320	290	290	295	290	265	230	240	235	265	290	...
23	280	240	230	230	230	250	245	355	485	390	350	355	340	310	295	285	280	220	250	245	250	300	290	305	292
24	280	260	225	240	240	255	240	205	290	320	335	340	310	315	300	285	265	250	245	220	240	260	260	265	269
25	250	245	280	250	255	250	230	280	325	360	325	300	...a	...a	...a	300	275	250	270	250	235	280	320	300	...
26	...a	250	...a	...a	...a	255	240	310	335	...a	...a	...a	...a	...a	...a	...a	290	280	240	255	240	255	275	270	...
27	270	260	230	220	260	260	240	275	320	320	...a	320	340	325	310	305	300	280	270	240	250	250	255	250	...
28	260	300	270	250	250	260	230	270	310	330	350	340	350	330	325	290	300	310	260	...a	280	260	290	...a	...
29	...a	...a	300	315	310	310	260	...a	...a	...a	...a	...a	...a	...a	430	345	325	300	285	265	290	265	250	300	...
30	280	290	290	285	320	465	330	420	365	425	350	370	330	p335a	315	310	300	290	270	235	...a	270	265	270	...
31																									
MEAN*	272	262	257	262	273	284	267	303	322	351	336	339	322	312	309	310	290	283	255	239	245	260	274	279	287

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 169

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1941 NOVEMBER 1941

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.9	3.4	3.7	...c	...a	...a	...a	...a	4.2	...a	4.2	3.7	...
2	...	...	4.2	4.4	4.6	4.7	4.7	4.7	4.6	4.6	4.3	3.7	...
3	...	...	...a	4.6	4.6	p4.8	4.9	4.7	4.8	4.7	4.4	3.8	...
4	...	4.3	...a	...a	...a	...a	4.8	4.9	4.8	4.7	4.4	3.6	...
5	...	4.0	4.2	4.9	4.6	5.4	4.7	...c	...c	...c	...c	...c	...
6	...	...c	...c	...c	...c	...c	...c	...c	...c	p4.6	4.3	3.7	...
7	...	...a	...a	...a	...a	...a	...a	...a	...a	4.3	...a	3.9	...
8	...	...a	...a	...a	4.6	4.6	4.7	4.7	4.7	4.6	4.3	4.0	...
9	...	4.5	4.5	4.5	4.8	4.8	4.8	4.8	4.8	4.7	4.0	3.8	...
10	...	4.1	4.6	4.6	4.8	4.9	4.9	...a	4.7	4.5	4.3	3.8	...
11	...	4.8	...a	4.8	...a	...a	...a	...a	4.5	4.4	4.2	3.7	...
12	...	...	4.4	4.9	4.8	4.8	...a	4.8	4.8	...c	...c	4.0	...
13	...	...	...a	...a	...a	...c	4.8	4.7	...c	...c	4.2	4.0	...
14	...	4.0	4.4	4.6	5.2	4.8	4.9	4.8	4.8	4.6	4.2	3.8	...
15	...	4.0	4.3	4.6	4.6	4.8	4.7	4.8	4.6	4.6	4.4	3.9	...
16	...	...c	...c	...c	4.7	5.0	...a	...a	4.7	4.5	4.3	...	...
17	...	4.3	4.7	4.6	4.8	4.7	4.8	4.8	4.6	...c	...c	3.8	3.0
18	...	3.8	4.0	4.2	p4.2c	4.3	...a	...a	...a	...a	4.2	4.0	3.1
19	...	4.1	4.3	4.4	4.4	4.6	4.6	p4.8a	4.5	4.4	4.3	...	...
20	3.8	4.3	4.6	5.0	4.8	5.2	5.0	4.6	4.9	4.9	...a	...	...
21	3.6	4.4	...a	...a	...a	...a	...a	4.9	4.8	...a	...a	4.0	...
22	...	4.3	...a	...a	...a	4.8	...a	4.8	4.9	4.6	4.4	4.2	3.4
23	...	4.4	4.3	4.6	4.8	5.0	p5.0a	4.9	4.9	4.6	4.3	...	...
24	...	...	4.5	5.0	5.0	...a	...a	5.0	...a	4.8	4.4	4.1	...
25	...	4.5	4.7	5.0	...a	4.9	...a	...a	...a	4.8	4.5	...	...
26	...	4.3	...a	...a	...a	...a	...a	...a	...a	...a	4.3	4.3	...
27	...	4.3	4.5	...a	...a	4.9	5.2	5.0	4.9	4.8	...a	...a	...
28	...	4.3	...a	5.2	5.2	5.0	...a	5.0	4.9	...a	...a	...	...
29	...	...a	...a	...a	4.4	4.4	...a	...a	4.6	4.6	4.0	...	...
30	3.8	4.4	4.5	4.8	...a	5.0	5.1	...a	...a	...a	...	...	...
31													
MEAN*	3.5	4.2	4.4	4.7	4.7	4.8	4.8	4.8	4.7	4.6	4.3	3.9	3.2

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	300	240	210	...c	...a	...a	...a	...a	250	p240a	225	280	...
2	...	...	215	220	195	205	p210	...a	220	245	225	230	...
3	...	...	...a	...a	...a	...a	...a	...a	230	215	225	220	...
4	...	235	...a	...a	...a	...a	...a	...a	...a	...a	215	220	...
5	...	220	215	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...	...c	...c	...c	...c	...c	...c	...c	...c	p225	220	235	...
7	...	...a	...a	...a	...a	...a	...a	...a	...a	235	...a	230	...
8	...	...a	...a	...a	...a	...a	...a	230	215	215	220	215	...
9	...	210	210	200	190	205	200	200	205	225	200	230	...
10	...	225	230	205	...a	...a	...a	...a	...a	220	235	220	...
11	...	240	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
12	...	...	...a	...a	...a	...a	...a	...a	240	...c	...c	250	...
13	...	...	...a	...a	...a	...c	...a	...a	...c	...c	210	235	...
14	...	220	210	205	225	185	220	195	230	225	225	230	...
15	...	225	215	200	235	200	220	215	210	220	210	225	...
16	...	...c	...c	...c	200	...a	...a	...a	220	220	230	...	...
17	...	210	220	210	p215a	220	215	230	220	...c	...c	225	...a
18	...	210	190	...a	...c	...a	...a	...a	...a	...a	240	230	260
19	...a	220	255	200	...a	...a	...a	...a	...a	...a	...a	...	...
20	240	230	...a	...a	220	225	...a	...a	...a	...a	...a	...	...
21	235	240	...a	...a	...a	...a	...a	...a	...a	...a	...a	245	...
22	...	235	...a	...a	...a	...a	...e	225	230	235	210	...a	245
23	...	250	220	...a	...a	220	...a	225	210	215	235	...	...
24	...	...	200	200	...c	...a	...a	...a	...a	220	230	225	...
25	...	220	240	200	...a	215	...a	...a	...a	210	220	...	...
26	...	230	...a	...a	...a	...a	...a	...a	...a	...a	225	225	...
27	...	200	...a	...a	...a	...a	...a	...a	225	...a	...a	...a	...
28	...	225	...a	220	220	225	...a	...a	250	...a	...a	...	...
29	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...	...
30	250	235	220	235	...a	...a	...a	...a	...a	...a	...a	...	...
31													
MEAN*	256	226	218	209	212	211	213	217	225	224	222	232	252

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 170

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.8	0.8	0.8	...c	1.0	1.0	1.1	1.1	1.0	1.1	1.0	0.7	0.7	2.2	2.5	2.8	p3.0c	3.2	3.1	3.2	3.2	3.0	3.2	2.8	2.1	...
2	0.7	0.8	1.0	1.0	1.1	1.1	1.0	1.0	1.1	1.0	0.9	0.8	0.8	2.0	2.5	3.0	p3.2	3.4	3.4	3.4	3.5	3.3	3.0	2.6	2.5	1.3
3	0.8	0.8	1.1	1.1	1.0	1.0	1.1	1.0	1.0	1.1	1.0	1.0	0.9	2.2	2.6	3.0	3.3	p3.3	3.4	3.5	3.5	p3.4	3.3	3.1	2.5	1.9
4	0.8	0.8	0.8	1.0	1.0	1.0	1.7	1.1	1.1	1.1	1.0	0.8	0.9	2.0	2.7	3.0	3.0	3.5	3.6	p3.6	p3.4	p3.2	p3.2	2.9	2.5	2.0
5	0.8	0.8	1.0	0.9	1.0	1.2	1.1	...c	...c	...c	...c	0.7	...e	2.2	2.7	2.9	3.3	3.6	...c	3.5	...c	...c	...c	...c	2.5	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	p0.8	0.8	0.7	0.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	p3.2c	3.0	2.6	1.9
7	0.7	0.8	0.9	1.0	1.1	1.0	...c	1.0	...c	0.8	0.8	0.7	0.6	1.8	2.5	3.0	3.2	3.3	3.3	...c	3.1	...c	3.0	...a	2.5	2.4
8	0.8	0.8	1.0	1.0	1.0	0.9	1.0	1.1	1.0	1.0	0.8	0.8	0.7	2.2	2.7	3.0	3.3	3.3	3.2	3.0	...a	3.0	...a	3.0	2.5	1.9
9	0.7	0.8	0.8	1.0	1.1	1.1	1.1	1.1	1.0	1.0	0.8	0.7	0.8	2.0	2.2	2.8	3.2	3.0	3.5	3.3	3.4	3.1	3.1	2.8	2.5	1.7
10	0.8	0.7	0.8	0.8	1.1	1.3	1.1	1.0	1.0	1.0	0.8	0.8	0.8	2.0	2.7	3.0	3.1	3.5	3.4	3.2	3.2	3.1	3.1	3.0	2.5	1.7
11	0.7	0.8	1.0	1.1	1.0	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.8	1.6	2.6	3.0	3.3	3.3	3.3	3.4	3.4	3.4	3.2	3.0	2.5	1.7
12	0.7	0.7	1.1	1.0	1.1	1.1	1.1	1.1	1.1	...c	...c	1.1	1.0	2.1	2.6	3.0	3.3	3.4	3.3	3.3	3.5	3.5	...c	...c	2.5	1.9
13	0.8	0.8	0.8	1.2	1.1	...c	1.7	1.7	1.6	...c	0.9	0.7	0.7	1.7	2.6	3.0	3.3	3.4	...c	3.5	...c	3.4	...c	3.0	2.4	1.8
14	0.8	0.8	1.0	1.1	1.1	1.0	1.1	1.0	1.0	1.0	0.8	0.8	0.8	2.2	2.6	3.1	3.3	3.4	3.5	3.3	p3.2a	3.1	3.2	2.1	2.3	1.7
15	0.7	0.8	0.9	1.0	0.9	1.1	1.0	1.0	1.1	0.9	0.8	0.8	0.6	...a	2.7	3.0	p3.2a	3.4	3.5	3.6	3.5	3.4	3.3	3.0	2.5	1.8
16	0.7	0.7	0.8	...c	0.8	0.8	1.1	0.8	0.8	0.9	0.7	0.8	0.7	2.2	2.8	3.1	...c	3.5	3.5	3.5	3.1	3.1	2.9	3.0	2.5	2.1
17	0.7	0.8	0.9	0.9	1.1	1.0	0.8	0.8	1.0	...c	...c	0.7	0.7	1.8	2.5	3.0	3.3	3.3	3.7	3.6	3.5	3.5	...c	...c	2.5	1.7
18	0.6	0.7	0.8	0.8	...c	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.8	2.0	2.5	2.9	3.1	...c	3.4	3.1	3.3	p2.6a	...a	...a	2.6	3.0
19	...e	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.1	1.0	1.0	0.8	...e	...	2.6	3.2	3.1	3.3	3.5	3.6	3.5	3.5	3.3	3.0	2.5	...
20	0.9	0.9	0.9	1.1	1.0	1.2	1.1	1.0	1.0	1.0	1.0	0.9	0.8	2.3	2.8	3.1	3.3	3.5	3.6	3.5	3.3	3.2	3.1	3.0	2.7	1.7
21	0.7	0.8	0.8	1.8	2.4	2.0	1.8	1.1	1.0	1.0	0.8	0.8	0.8	2.1	2.8	3.1	3.3	3.7	3.5	3.2	...a	...a	3.5	3.2	2.8	2.0
22	...e	0.8	0.8	1.0	0.9	1.0	1.0	1.0	1.0	0.8	0.9	0.8	0.7	...	2.9	3.1	3.4	3.4	3.4	3.3	3.2	3.7	3.4	3.2	2.7	1.9
23	0.8	0.8	0.9	0.9	1.1	1.1	1.1	1.1	1.0	0.9	1.0	0.8	0.7	2.2	2.9	3.4	3.5	3.6	3.6	3.6	3.2	3.4	3.1	3.2	3.3	...a
24	0.8	0.8	0.8	2.0	1.9	1.2	1.1	1.8	1.1	1.0	1.0	0.8	0.6	2.5	2.8	3.1	3.4	3.5	3.3	3.7	3.3	3.3	3.0	2.9	2.7	2.4
25	0.7	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.1	1.0	0.8	0.7	0.6	2.3	2.8	3.2	3.5	3.6	3.7	3.7	3.5	3.3	...a	...a	...a	1.1
26	...e	0.7	0.8	0.8	1.0	0.8	0.8	0.9	1.1	0.8	1.1	1.0	0.8	2.3	2.9	3.3	3.6	3.8	3.7	3.4	3.5	3.1	2.6	3.1	2.8	2.1
27	0.7	0.8	0.8	0.8	1.0	0.9	1.1	1.0	1.0	1.0	0.9	0.8	0.7	2.3	3.4	3.2	3.4	3.5	3.6	3.6	3.4	3.6	3.3	3.0	...a	2.5
28	0.7	0.8	1.3	1.0	1.0	1.1	1.1	1.0	1.0	0.9	0.8	0.8	0.7	2.3	2.8	3.3	3.0	3.6	3.3	3.3	3.2	...a	3.3	3.2	...a	...a
29	0.7	0.7	0.9	1.0	1.8	1.1	1.1	1.2	1.0	0.9	0.9	0.8	0.7	1.9	2.6	3.0	3.2	4.1	3.7	3.6	3.5	3.7	3.5	3.2	2.8	...
30	0.8	0.8	0.8	0.9	1.0	1.1	1.0	1.1	1.0	0.8	0.8	0.8	0.7	2.4	2.9	3.2	3.3	3.5	3.6	3.3	3.7	3.8	3.4	3.2	2.8	1.9
31																										
MEAN*	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.8	0.8	2.1	2.7	3.1	3.3	3.5	3.5	3.4	3.4	3.3	3.2	3.0	2.6	1.9

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 171

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1941 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND DECEMBER 1941

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.3	5.9	4.8	4.7	4.3	4.4	4.8	p5.1a	5.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...a	p4.8a	5.0	p4.8a	p5.0a	...a	5.1	4.7	4.8	4.9	4.8	5.0	5.0	5.3	5.3	...
3	4.9	4.2	3.1	2.5	p2.5f	2.6	3.4	4.2	4.6	p5.0c	5.2	5.7	...a	5.8	5.5	...c	5.3	5.5	5.7	5.4	5.7	p5.5f	5.3	5.9	...
4	5.8	5.0	4.6	4.6	4.7	4.3	4.8	5.2	5.4	5.7	6.6	8.5	9.6	9.7	9.0	8.4	6.8	6.4	6.6	6.9	7.2	7.1	7.1	7.4	6.6
5	7.3	5.2	3.5	2.9	2.6	3.0	4.2	4.7	4.8	5.3	5.2	5.8	6.3	6.4	6.8	6.7	6.5	6.4	6.2	6.6	7.0	6.7	6.7	6.5	5.6
6	6.6	6.0	4.7	4.2	3.7	3.6	4.4	4.5	4.8	5.3	5.9	6.1	6.3	6.4	6.4	6.4	6.1	6.2	6.3	6.6	6.7	6.9	5.3	5.7	5.6
7	6.0	5.6	5.0	4.3	3.8	4.0	5.1	5.3	5.7	6.2	7.2	7.0	7.0	7.2	7.3	7.1	7.2	7.1	7.5	8.2	7.3	6.5	6.0	6.0	6.2
8	7.3	5.7	6.0	5.8	5.3	4.7	5.1	5.5	5.9	6.1	6.6	...a	8.5	9.2	8.8	8.5	8.3	7.7	7.8	8.5	8.5	7.6	7.0	p6.5f	...
9	6.0	5.9	6.6	5.5	5.5	5.0	5.4	6.2	7.2	8.0	9.2	10.3	10.8	10.3	10.2	9.3	9.0	9.4	9.2	8.5	7.9	7.5	6.6	6.6	7.8
10	6.6	6.0	5.4	4.8	4.2	4.2	5.0	5.5	6.7	6.9	7.8	8.5	8.8	9.0	...a	8.4	8.1	8.9	8.3	8.0	7.5	6.6	6.3	6.2	...
11	6.2	5.8	6.0	5.2	4.4	4.1	5.1	5.9	6.4	7.0	7.9	8.3	8.8	8.9	9.0	9.0	9.7	9.7	9.3	8.8	7.5	5.7	5.2	5.3	7.0
12	5.3	5.6	5.4	4.4	5.1	5.5	5.2	5.6	6.4	6.7	7.5	p8.0a	8.4	p9.3a	...a	9.9	9.3	8.7	8.3	7.9	7.4	6.5	6.4	6.6	...
13	6.4	6.0	5.4	4.7	4.5	4.2	5.0	6.0	6.2	7.1	7.4	8.3	9.1	9.2	8.8	8.7	8.4	8.4	8.8	8.0	7.1	6.4	5.8	5.9	6.9
14	5.7	5.3	5.0	4.9	4.5	4.0	4.8	5.7	p6.2	7.0	7.6	9.0	9.0	10.0	p9.6	8.4	...a	7.3	7.2	7.7	7.4	6.4	5.8	5.6	...
15	5.6	5.7	5.8	5.2	3.8	3.5	4.4	5.2	5.2	p5.4a	p5.7a	6.1	6.1	6.3	6.7	7.1	6.3	6.6	6.5	6.3	6.2	5.5	5.0	5.2	5.6
16	5.4	5.0	4.0	...a	3.5	3.9	5.0	5.9	6.1	6.6	6.7	7.3	8.4	9.3	10.0	9.7	8.5	7.9	7.5	7.1	6.6	6.0	5.8	5.7	...
17	5.9	5.8	5.2	4.6	4.1	4.2	5.0	5.7	6.2	7.0	8.2	8.2	8.2	8.8	9.5	9.1	9.1	9.4	...c	7.2	...c	6.1	6.1	...c	...
18	5.6	5.2	4.7	4.3	4.3	4.1	4.5	4.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
19	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.2	6.6	6.9	7.3	7.4	6.8	6.1	5.8	5.4	5.2	...
20	5.5	4.6	4.4	3.5	3.4	3.5	4.5	5.0	5.5	7.0	7.5	7.3	7.8	8.1	8.3	8.0	8.5	8.5	8.6	8.3	7.7	7.0	6.1	6.2	6.4
21	6.0	5.6	5.2	...f	4.7	4.7	5.0	...c	...c	6.1	...c	...c	...c	...c	...c	...c	8.0	7.8	...c	...c	...c	...c	...c	...c	...
22	...c	5.3	5.0	4.6	4.4	4.7	...c	...c	6.0	7.4	7.1	7.5	8.1	9.0	9.7	9.4	9.0	8.8	8.3	7.5	6.9	6.6	6.4	7.4	...
23	7.7	5.2	...f	4.7	4.1	...c	5.4	5.8	6.0	7.0	8.0	8.8	8.2	8.4	9.1	8.9	8.7	8.0	7.8	7.2	6.9	6.5	6.3	6.0	...
24	6.0	5.9	5.9	6.2	5.5	5.5	5.6	6.5	7.2	8.3	8.5	7.7	8.4	9.2	9.8	10.1	9.4	8.6	8.3	8.2	7.7	7.0	6.1	6.2	7.4
25	6.2	5.9	5.3	5.0	4.7	4.5	5.2	5.4	5.3	5.6	6.3	6.9	6.9	7.1	6.8	6.8	6.6	6.3	6.6	6.4	6.5	6.4	6.0	5.7	6.0
26	5.5	5.0	4.6	4.6	4.4	4.2	5.0	5.9	6.0	5.8	6.3	6.4	7.0	7.4	8.1	8.6	8.7	8.2	7.9	6.8	6.7	6.0	5.6	5.5	6.3
27	5.5	5.6	5.0	4.4	3.5	3.9	4.8	4.8	4.7	5.0	5.5	5.9	6.1	6.5	6.7	6.8	7.4	7.1	7.4	7.4	7.0	6.0	5.5	5.7	5.8
28	5.9	6.0	6.0	5.9	5.5	5.6	5.8	5.4	5.3	6.2	6.6	7.0	7.8	7.9	8.4	8.6	7.7	7.3	7.1	6.5	6.1	6.0	6.0	6.0	6.5
29	5.8	5.1	4.2	3.8	3.7	3.5	4.2	4.9	5.1	5.7	6.9	6.6	6.0	7.1	7.4	7.8	7.2	7.1	7.1	6.8	6.7	6.3	6.0	6.0	5.9
30	5.5	5.4	4.9	4.3	4.2	3.7	4.2	4.5	5.3	5.4	6.2	6.3	6.5	7.1	7.0	7.3	7.0	7.0	6.6	7.0	6.7	6.6	6.4	6.7	5.9
31	6.5	5.8	5.4	4.9	4.5	4.5	4.5	5.0	5.5	6.0	6.6	7.3	7.9	8.4	8.1	7.7	7.5	7.2	6.5	6.4	6.7	6.7	6.4	6.0	6.3
MEAN*	6.0	5.5	5.1	4.6	4.2	4.2	4.8	5.4	5.8	6.3	6.9	7.4	7.8	8.2	8.2	8.3	7.8	7.7	7.5	7.3	7.0	6.5	6.0	6.1	6.5

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 172

DECEMBER 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1941

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	...a	...a	...a	...a	300	365	p400a	460	...c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...c	...a	...a	...a	p860	p630	...a	530	530	250	280	285	270	310	280	280	...
3	250	285	...a	...a	355	320	245	540	590	...a	530	440	...a	420	455	...c	415	380	...a	255	250	...a	...a	...a	...
4	240	265	335	270	240	245	250	390	385	p405a	425	335	320	310	310	290	315	310	250	260	270	250	315	...a	...
5	230	215	200	250	300	275	400	480	415	400	500	...a	390	400	340	340	355	315	...a	265	260	265	270	270	...
6	270	...a	255	315	330	280	360	550	540	500	405	390	415	400	360	360	365	240	250	250	250	270	285	270	...
7	...a	...a	...a	260	260	250	240	350	415	335	330	355	360	350	350	350	335	315	290	250	240	240	240	260	...
8	245	250	275	275	260	250	245	330	340	405	430	...a	...a	320	335	325	305	280	285	...a	270	...a	...a	...a	...
9	...a	...a	240	250	255	250	240	245	310	350	320	310	280	285	...a	300	310	290	255	225	240	300	290	270	...
10	250	...a	240	240	275	260	240	310	330	...a	325	330	310	330	...a	...a	...a	...a	250	250	220	260	260	285	...
11	260	260	265	210	...a	260	255	335	340	...a	330	320	320	320	310	310	310	280	250	250	210	240	275	325	...
12	300	255	250	250	...a	240	245	230	315	350	335	...a	350	...a	...a	...a	290	...a	275	260	225	235	295	270	...
13	260	235	...a	265	250	250	250	280	305	340	330	325	310	300	...a	300	310	290	250	230	220	255	310	270	...
14	280	270	275	255	255	260	250	...a	...a	350	...a	...a	360	310	...a	...a	...a	270	295	250	240	250	...a	275	...
15	265	260	240	240	300	280	240	360	530	...a	...a	...a	430	420	375	335	...a	330	270	250	250	240	310	310	...
16	250	230	250	...a	280	270	240	335	325	365	325	385	365	370	330	300	290	290	270	240	245	260	270	270	...
17	270	270	230	225	255	270	260	360	345	310	300	...a	340	350	335	320	310	290	...c	...c	...c	270	300	250	...
18	300	280	300	375	310	325	330	...c	...	...	...	...	...	...c	420	360	335	360	280	260	240	275	285	320	...
19	250	...a	...c	...	...	...	...	...	...	...	...	...	...	...c	420	...a	...a	330	270	275	270	280	295	310	...
20	275	275	...a	...a	...a	310	...a	410	435	320	320	315	350	350	310	330	310	285	270	240	255	235	265	260	...
21	255	295	295	...a	...a	235	255	...c	...c	370	330	395	...c	...c	340	...c	295	285	250	250	...c	...c	...c	...c	...
22	...c	...c	...c	280	...c	...c	240	295	325	295	315	345	340	330	290	305	300	270	260	240	240	235	290	280	...
23	215	...a	230	265	275	...c	230	280	330	340	325	290	325	350	320	300	290	295	270	245	240	...a	...a	280	...
24	...a	...a	270	265	250	240	240	300	315	280	300	290	335	335	310	290	280	270	230	245	235	240	250	290	...
25	260	240	225	260	230	245	230	210	200	500	370	370	335	330	330	320	320	330	230	240	250	250	245	255	282
26	230	245	260	240	240	235	230	280	325	470	340	...a	360	340	330	...a	295	290	250	260	250	250	280	280	...
27	245	230	230	200	270	250	230	215	520	490	420	...a	430	370	350	370	310	310	275	240	240	230	275	290	...
28	280	265	270	250	255	260	250	300	300	370	350	380	325	345	325	290	300	285	260	...a	275	280	310	255	...
29	245	245	245	270	260	280	...a	435	600	...a	360	355	460	360	340	310	310	280	275	235	260	255	270	245	...
30	250	250	230	205	240	250	260	530	410	440	390	425	390	335	365	325	310	305	280	245	245	250	290	240	311
31	235	250	230	265	260	265	230	400	440	435	350	370	340	320	315	320	310	275	270	240	250	250	270	265	298
MEAN*	255	254	241	252	268	261	254	350	387	383	362	354	356	346	338	319	314	294	263	246	245	253	280	272	298

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 173

DECEMBER 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1941

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	3.5	p4.0a	4.4	...c	...	...	...	...	...	...	...	...	...
2	...	...	...c	...a	...a	4.5	p4.6	p4.6	p4.8	4.4	4.3	...	...
3	...	3.8	4.2	4.4	4.4	...a	...a	4.7	4.7	...a	4.4	4.1	...
4	...	4.3	4.5	p4.6a	4.8	4.8	4.9	4.9	4.8	4.7	4.6	4.2	...
5	3.7	4.0	4.2	4.5	4.6	4.6	5.0	4.8	4.7	4.7	4.5	4.2	...
6	3.7	4.0	4.1	4.4	4.6	4.7	4.8	4.8	4.9	4.8	4.7	...	...
7	...	4.4	4.5	4.5	4.6	4.8	4.8	4.8	4.9	4.7	4.5	4.2	3.5
8	...	4.8	...a	4.8	...a	...a	...a	...a	...a	...a	...a	...a	...
9	...	...	4.8	...a	4.9	5.2	...a	...a	...a	...a	...a	...	...
10	...	4.2	4.6	...a	4.8	4.9	5.0	5.0	...a	...a	...a	...a	...
11	...	4.3	4.7	...a	...a	4.9	4.9	5.0	...a	...a	...a	...	...
12	...	...	4.6	4.9	...a	...a	5.0	...a	...a	...a	4.5	...	...
13	...	4.2	4.6	4.8	4.8	4.8	4.9	...a	...a	...a	...a	...	...
14	...	...a	...a	5.0	...a	...a	5.0	4.9	...a	...a	...a	...	...
15	...	4.0	4.4	...a	...a	...a	4.7	4.6	4.6	4.6	...a	...	...
16	...	4.3	4.5	...a	4.9	...a	4.9	...a	...a	...a	...a	4.1	...
17	...	4.3	4.7	4.9	4.5	...a	5.0	...c	4.9	...c	4.8	...	...
18	...	4.0	...c	...	...	...	...	...c	4.7	4.6	4.5	4.3	3.5
19	...	...c	...	...	...	...	...	...c	...a	...a	...a	5.0	...
20	...	4.1	4.3	4.5	4.9	4.9	5.1	5.0	4.8	4.8	4.7	4.2	3.5
21	...	...c	...c	4.6	...a	4.8	4.8	4.8	4.6	...c	4.6	...	...
22	...	4.3	4.6	4.7	4.8	...a	4.9	4.8	4.8	4.6	4.6	4.2	...
23	...	4.2	4.5	4.7	...a	4.8	5.0	4.9	4.8	4.7	4.5	4.3	3.6
24	...	4.2	4.5	4.7	4.9	4.8	4.9	4.9	4.8	4.7	4.4	4.1	...
25	...	...	...	4.7	4.6	4.7	4.9	4.6	4.7	4.7	4.5	4.2	...
26	...	4.2	4.5	5.3	4.8	...a	...a	4.6	...a	...a	4.5	4.2	3.3
27	...	...	4.2	4.4	4.5	...a	4.7	4.8	4.7	4.8	4.4	4.2	...
28	3.3	4.0	...a	4.7	4.7	5.0	4.8	5.0	4.8	4.7	4.5	4.2	...
29	...	4.2	4.3	...a	4.7	4.7	4.8	4.8	4.8	4.6	4.5	4.1	3.6
30	3.1	4.2	4.2	4.5	4.6	4.9	4.8	4.8	4.8	4.7	4.5	4.2	3.6
31	...	4.0	4.4	4.6	4.7	...a	4.9	...a	4.7	...a	...a	...a	...
* MEAN	3.5	4.2	4.4	4.7	4.7	4.8	4.9	4.8	4.8	4.7	4.5	4.2	3.5

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...a	...a	...a	...c	...	...	...	...	...	...	...	...	...
2	...	...	...c	...a	...a	285	p240	p220	...a	...a	230	...	...
3	...	235	225	220	225	...a	...a	...a	...a	...c	230	230	...
4	...	230	235	p230a	230	200	220	210	220	215	220	220	...
5	250	225	230	...a	...a	...a	220	225	230	200	260	225	...
6	225	230	215	200	...a	...a	...a	...a	220	230	220	...	...
7	...	240	...a	240	230	...a	205	...a	...a	210	...a	250	230
8	...	230	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
9	...	...	250	...a	230	...a	...a	...a	...a	...a	...a	...	...
10	...	235	220	...a	...a	225	...a	...a	...a	...a	...a	...a	...
11	...	240	245	...a	...a	200	...a	...a	...a	...a	...a	...a	...
12	...	...	215	225	...a	...a	...a	...a	...a	...a	...a	...	...
13	...	210	225	200	200	...a	...a	...a	...a	...a	...a	...a	...
14	...	...a	...a	...a	...a	...a	...a	220	...a	...a	...a	...a	...
15	...	...a	...a	...a	...a	...a	230	200	240	230	...a	...	...
16	...	230	230	...a	...a	...a	...a	...a	...a	...a	...a	240	...
17	...	220	250	220	...a	...a	...c	...c	235	...c	230	...	...
18	...	230	...c	...c	...c	...c	...c	...c	230	...a	220	230	...
19	...	...c	...c	...c	...c	...c	...c	...c	...a	...a	...a	...a	...
20	...	250	...a	240	...a	...a	p230	220	210	220	225	250	245
21	...	...c	...c	245	...a	...a	...a	220	...a	...c	...c	...c	...
22	...	...	235	225	...a	...a	210	220	...a	225	215	225	...
23	...	225	230	...a	...a	210	190	200	215	230	220	210	240
24	...	220	230	225	215	...a	190	...a	215	220	230	230	...
25	...	...a	...a	215	...a	...a	220	220	230	205	220	230	...
26	...	220	220	210	220	...a	...a	...a	...a	...a	220	225	225
27	...	...	220	190	...a	...a	...a	...a	...a	230	230	225	...
28	235	230	...a	205	...a	...a	225	285	225	...a	230	240	...
29	...	...a	245	...a	...a	...a	...a	230	...a	245	...a	...a	220
30	220	220	200	...a	190	180	...a	225	...a	...a	235	225	240
31	220	220	200	...a	190	180	...a	225	...a	...a	235	225	240
* MEAN	232	228	229	221	218	217	218	223	225	222	227	230	233

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 174

DECEMBER 1941

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1941

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	p0.6	0.7	...c	...	...	...	...	...	...	...	...	...
2	...	...	...c	0.9	1.1	0.8	1.1	1.1	1.8	1.8	0.8	0.8	0.6
3	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	...c	1.0	0.8	0.7
4	0.6	0.8	0.7	0.8	1.0	1.1	1.0	1.3	1.1	1.1	0.8	0.8	0.7
5	0.8	0.7	0.8	0.8	0.9	1.0	1.1	1.1	0.8	0.8	0.7	0.7	0.7
6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.1	0.8	1.0	0.8	0.8	0.6
7	0.6	0.8	0.8	0.7	1.1	0.8	0.8	1.1	1.1	1.1	1.0	0.8	0.7
8	0.7	0.8	0.8	0.8	1.0	1.0	1.1	1.0	0.7	0.8	0.8	0.7	0.7
9	0.7	0.7	0.8	0.8	0.8	0.8	0.8	1.1	1.0	0.7	0.7	0.8	0.8
10	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	1.0	1.1	1.0	0.8	0.8
11	0.7	0.8	0.8	0.8	0.8	0.8	1.1	1.1	1.1	0.9	0.8	0.7	0.7
12	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.8	0.7
13	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.1	0.9	0.7	0.7
14	0.5	0.7	0.8	0.7	0.8	0.8	0.9	1.1	1.1	0.9	0.8	0.7	0.8
15	0.7	0.8	0.8	0.8	0.8	0.9	0.9	1.0	0.8	1.0	0.8	0.7	0.8
16	0.7	0.7	0.8	0.8	p0.9c	0.9	1.0	1.1	1.0	0.9	0.8	0.8	0.7
17	0.7	0.7	0.8	0.8	0.8	1.1	1.1	0.7	0.8	1.0	0.8	0.8	...e
18	...e	0.8	0.9	...c	0.9	...c	...c	...c	...c	...c	1.0	0.7	...c
19	0.7	0.9	1.1	...c	...	...	...	...c	0.8	0.8	0.8	0.8	...c
20	0.7	0.8	0.9	0.7	0.8	0.8	1.1	1.1	1.0	1.0	0.9	0.8	0.8
21	0.7	...c	...c	0.8	0.8	...c	0.8	0.8	0.8	0.8	0.8	0.7	0.6
22	0.8	1.1	0.8	0.8	0.9	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.7
23	0.7	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.9	0.8	0.7	0.7
24	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6
25	0.6	0.7	0.7	0.8	0.8	1.1	1.1	1.1	1.2	1.0	0.8	0.7	0.7
26	0.7	0.7	0.7	0.8	1.0	0.8	1.0	0.8	0.9	0.8	0.8	0.8	0.8
27	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.8	1.0	0.8	0.8	0.7	0.8
28	...e	0.7	0.8	0.8	0.8	0.9	0.8	1.0	0.8	0.8	0.8	0.7	...e
29	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.1	0.8	0.8	0.9	0.8	0.7
30	0.7	0.7	0.8	0.8	0.8	0.8	0.8	1.0	1.0	1.7	0.8	0.7	0.7
31	0.6	0.5	0.6	0.8	0.9	0.8	0.8	1.0	0.8	0.8	0.8	0.7	0.5
* MEAN	0.7	0.8	0.8	0.8	0.9	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.2	p2.5a	2.8	...c	...	...	...	...	...	...	...	...	...
2	...	...	...c	3.1	3.5	3.6	3.8	3.7	p3.6	3.1	3.2	2.7	1.8
3	2.2	2.8	3.2	3.4	3.5	3.4	3.3	3.3	3.3	...c	3.2	2.8	2.1
4	2.1	2.8	3.2	3.3	3.3	3.4	3.4	3.5	2.9	3.1	3.1	2.8	2.1
5	2.3	2.7	3.2	3.3	3.4	3.3	...a	...a	3.6	3.3	3.2	2.8	2.1
6	2.1	2.7	3.1	3.4	3.6	3.2	...c	3.3	3.3	3.4	3.3	2.8	2.2
7	2.3	2.7	3.1	3.3	3.3	3.6	3.2	3.2	3.0	3.0	2.9	2.7	1.8
8	2.5	p2.8	3.2	3.3	3.4	3.5	3.5	3.5	3.5	3.4	3.3	2.9	2.2
9	2.2	2.8	3.0	3.5	3.5	3.3	3.5	3.6	3.5	3.1	2.9	2.2	...
10	2.3	2.8	3.0	3.4	3.5	3.0	3.6	3.5	3.5	3.4	3.2	2.7	1.9
11	...a	2.7	3.1	3.4	3.5	3.6	3.5	3.5	3.5	3.3	3.1	2.6	1.8
12	2.2	2.8	3.1	3.5	3.6	3.6	3.6	3.5	3.4	3.0	3.1	...a	...a
13	...a	2.9	3.2	3.5	3.5	3.8	3.8	3.8	3.6	3.4	3.0	2.5	1.8
14	2.2	2.8	3.2	3.4	3.6	3.6	3.5	3.7	3.6	3.4	2.9	2.5	...a
15	2.2	2.7	3.1	3.3	3.3	3.6	3.8	3.6	3.5	3.4	3.1	2.8	2.1
16	2.2	2.8	3.0	3.6	p3.6c	3.8	3.7	3.5	3.6	3.4	3.0	2.5	2.1
17	2.2	2.8	3.2	3.4	3.4	3.3	3.3	3.2	3.4	3.3	2.9	3.0	2.3
18	...c	2.7	3.1	...c	3.5	...c	...c	...c	3.5	3.3	...c	2.9	...c
19	...c	...	...	...	...	...	...	...c	3.0	2.9	2.0	...c	...c
20	2.0	2.8	3.2	3.2	3.3	...a	3.0	3.1	2.9	3.4	3.2	2.8	2.2
21	2.2	...c	...c	3.4	3.5	3.6	3.7	...c	3.6	3.5	3.2	2.7	2.1
22	2.3	...c	3.2	3.4	3.6	3.7	3.6	3.4	3.2	...a	...a	...a	2.2
23	2.3	2.8	3.2	3.4	3.4	3.3	3.0	3.6	3.6	3.4	3.1	2.8	2.4
24	2.2	2.7	3.2	3.3	3.5	3.5	3.6	3.6	3.4	3.4	3.1	2.8	2.3
25	2.2	2.7	3.0	3.3	3.5	3.7	3.7	3.6	3.5	3.4	3.0	2.8	2.3
26	2.0	2.7	3.1	3.4	3.6	3.7	3.7	3.6	3.5	3.1	3.1	...a	2.2
27	2.1	2.6	3.1	3.3	3.5	3.5	3.6	3.6	3.6	3.5	3.2	2.8	1.9
28	2.0	2.7	3.0	3.4	3.6	3.6	3.8	...c	3.6	3.5	3.3	2.7	2.1
29	2.0	2.7	3.0	3.3	3.5	3.6	3.6	3.6	3.6	3.5	3.2	2.8	2.6
30	2.0	2.5	3.0	3.2	3.5	3.5	3.8	3.7	3.7	3.6	3.3	2.8	2.2
31	2.0	2.5	3.0	3.3	3.5	3.7	3.6	3.8	3.6	3.5	3.2	2.8	2.2
* MEAN	2.2	2.7	3.1	3.4	3.5	3.5	3.5	3.5	3.4	3.4	3.1	2.7	2.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 175

JANUARY 1942 — JANUARY 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.3	5.5	5.3	5.0	4.7	4.6	5.2	5.7	6.0	6.7	7.7	7.5	7.4	7.3	7.5	7.8	7.3	7.3	6.9	6.6	6.2	6.0	5.4	5.2	6.3
2	5.6	5.4	5.6	5.0	4.5	4.6	6.1	6.7	7.4	p7.5c	7.5	8.2	8.5	8.5	8.0	7.7	8.1	8.6	8.0	7.4	6.5	6.2	6.6	6.6	6.9
3	6.7	6.5	6.0	5.0	4.8	4.3	4.4	5.1	5.5	6.2	6.3	6.5	p6.6a	5.9	6.2	6.6	6.9	6.5	6.1	5.8	5.3	4.9	4.8	4.5	5.7
4	4.3	4.3	4.5	3.8	p3.3a	2.9	4.2	4.9	5.2	...c	...c	...c	...c	5.6	6.5	6.0	5.8	5.8	6.1	5.6	5.6	5.7	5.6	5.6	...
5	5.5	5.2	4.5	4.1	3.3	3.3	4.7	5.7	6.3	6.5	7.7	7.1	6.7	7.1	7.2	7.8	7.9	7.8	7.0	7.1	7.2	6.6	6.6	6.6	6.2
6	6.8	5.8	4.8	4.3	3.7	3.5	4.4	5.2	4.9	5.4	...c	...c	7.0	7.1	7.3	7.5	6.6	6.1	6.0	6.1	6.3	6.3	6.0	5.8	...
7	5.5	5.3	5.0	5.0	p4.9a	4.8	4.9	5.0	4.8	5.8	6.5	7.0	7.2	7.3	7.2	8.0	7.3	7.5	7.7	7.3	7.3	7.0	6.7	p6.2f	6.3
8	5.8	4.8	4.8	4.8	5.0	4.7	5.3	6.1	5.6	6.2	7.0	7.5	8.4	9.0	9.5	9.9	9.8	9.0	7.9	7.5	7.3	7.3	7.1	7.0	7.0
9	6.3	5.7	5.7	5.3	4.9	5.0	6.0	5.7	5.8	6.1	7.1	8.0	8.7	8.1	p8.5c	9.0	8.5	7.7	7.2	7.5	7.6	7.6	7.3	7.2	6.9
10	6.2	5.3	4.7	4.8	4.7	4.5	5.7	6.7	6.6	6.9	7.0	7.3	7.6	7.2	7.2	8.0	7.2	6.5	6.2	6.3	7.1	7.3	6.8	6.5	6.4
11	7.4	5.6	5.3	5.6	5.0	4.4	4.9	5.5	6.2	7.1	8.1	9.3	9.5	9.4	10.0	9.8	9.7	9.0	9.0	8.5	8.2	7.8	6.8	6.1	7.4
12	5.7	5.6	5.3	5.0	4.9	4.5	4.9	5.5	6.6	7.2	7.3	7.3	7.8	7.9	7.5	7.6	7.8	7.1	6.7	6.0	6.8	7.1	7.0	6.8	6.5
13	6.2	5.4	5.2	4.7	4.2	4.1	5.0	5.5	6.6	8.0	8.5	8.9	8.9	9.3	9.3	9.3	9.1	8.5	7.5	7.2	6.3	6.0	6.3	p6.0a	6.9
14	5.5	4.7	4.1	3.9	3.9	3.4	4.5	5.0	5.9	6.3	6.3	6.7	6.3	6.5	6.9	7.5	7.8	7.7	6.7	6.5	6.5	6.4	5.8	5.4	5.8
15	5.0	4.5	4.7	4.8	4.7	4.7	5.3	6.4	7.1	8.1	...c	...c	8.0	8.4	9.1	8.5	8.3	7.5	7.7	7.5	6.5	6.4	6.2	6.5	...
16	6.1	6.0	6.0	5.2	3.9	3.8	4.2	4.8	5.3	5.5	6.1	6.1	6.7	6.6	6.5	6.9	6.7	6.0	5.9	5.7	6.4	6.2	6.0	5.4	5.8
17	5.0	4.5	4.2	3.6	3.5	3.3	4.3	4.4	4.9	...c	...c	5.2	5.9	5.6	5.9	5.7	5.5	5.2	5.2	5.5	5.8	5.8	5.5	5.5	...
18	5.2	4.1	p3.8a	3.3	2.9	2.7	3.9	3.8	4.4	5.1	p5.8	6.3	7.3	7.4	7.6	7.2	6.1	6.0	6.1	5.9	6.5	p6.0	6.0	5.9	5.4
19	4.8	4.2	3.6	3.1	2.8	2.6	3.8	4.6	4.9	5.6	5.7	6.2	6.4	p6.3c	6.3	7.0	7.1	7.0	6.1	5.8	5.8	5.0	4.7	4.7	5.2
20	4.8	4.9	4.3	3.8	3.5	3.5	4.7	5.2	6.0	7.1	8.0	8.6	9.5	9.8	8.7	7.8	7.5	6.6	6.0	6.0	6.0	5.8	5.8	5.4	6.2
21	5.3	4.8	4.3	3.9	3.2	2.9	4.1	5.3	6.1	6.7	7.1	7.6	7.6	8.0	8.5	7.9	7.4	6.7	6.7	6.1	5.8	5.5	5.4	5.4	5.9
22	5.5	4.7	4.1	3.7	p3.3c	...c	...c	...c	p5.8c	5.8	6.2	6.8	7.3	8.4	8.4	8.4	7.7	6.4	5.9	6.8	6.9	6.7	5.9	5.5	...
23	6.2	6.2	5.3	4.7	3.5	3.0	4.0	5.1	6.5	7.1	7.8	8.9	9.0	9.1	9.3	9.0	8.4	7.7	7.1	6.3	5.8	5.5	5.2	4.8	6.5
24	4.7	4.5	4.5	3.7	3.3	3.3	4.8	5.4	6.0	6.8	7.1	8.4	8.7	9.2	10.2	9.0	8.0	7.8	7.3	7.0	6.9	6.4	5.8	5.3	6.4
25	5.0	4.7	4.3	4.1	3.8	3.8	4.9	5.0	4.8	5.1	5.6	6.2	6.4	6.7	6.9	7.2	7.3	7.2	7.1	7.2	6.5	5.6	4.9	4.9	5.6
26	5.0	4.7	4.5	4.4	3.6	3.4	4.0	5.3	5.5	p6.0c	6.0	6.5	7.5	8.6	8.9	8.0	7.3	6.8	6.0	5.9	5.5	5.0	4.8	4.2	5.7
27	3.8	3.8	3.7	3.7	3.6	3.2	4.1	4.9	5.0	4.8	5.0	5.2	5.2	5.6	6.1	6.3	5.7	5.4	5.4	5.5	5.5	4.8	4.2	4.1	4.8
28	4.2	3.9	3.6	3.9	4.1	4.3	5.2	5.9	6.2	6.2	5.9	5.7	5.9	6.3	6.7	6.2	6.4	p6.3a	6.0	5.7	5.9	5.4	5.0	4.0	5.4
29	4.0	4.0	3.8	2.5	2.6	2.8	4.6	5.4	5.6	4.8	4.7	4.7	4.9	4.8	5.1	5.3	5.5	5.5	5.3	4.8	4.8	4.7	4.4	4.2	4.5
30	4.2	4.0	4.1	4.0	3.8	3.8	4.2	5.2	5.5	6.0	6.9	7.2	7.4	8.4	8.2	7.4	7.3	6.2	6.0	5.3	5.2	5.0	4.9	4.8	5.6
31	4.9	4.6	4.5	4.2	4.0	3.5	3.5	4.2	4.4	4.5	5.1	5.0	5.2	5.1	5.1	5.4	5.1	5.1	4.8	5.0	5.0	4.8	4.6	4.7	4.7
MEAN*	5.4	4.9	4.6	4.3	3.9	3.8	4.7	5.3	5.7	6.2	6.7	7.0	7.3	7.4	7.6	7.6	7.3	6.9	6.6	6.4	6.3	6.0	5.8	5.5	6.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 176

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JANUARY 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	265	265	240	245	265	240	350	370	360	310	325	325	345	345	320	320	285	270	240	250	255	240	p245a	289
2	250	290	240	240	240	260	255	290	260	...c	360	340	340	335	350	330	320	280	260	235	200	260	260	295	...
3	275	265	280	p290a	300	300	450	410	460	400	400	...a	p330a	...a	425	370	340	320	290	255	250	265	270	285	...
4	275	p270a	260	260	...a	...a	360	395	350	...c	...c	...c	...c	455	355	360	345	340	285	260	250	300	290	290	...
5	270	255	230	230	250	265	250	250	315	395	290	360	390	375	335	335	315	280	280	265	300	275	270	290	297
6	245	290	p300a	310	350	305	270	310	240	400	...c	...c	355	350	340	p320a	305	300	310	245	260	275	280	280	...
7	255	255	315	290	...a	255	210	...a	...a	370	355	350	360	320	350	310	330	310	285	255	250	280	255	245	...
8	245	260	270	265	260	235	215	210	215	360	300	330	330	325	320	300	280	270	255	220	260	260	250	240	270
9	265	255	250	235	260	245	230	215	260	395	360	330	315	350	p325c	300	290	280	220	240	240	275	255	250	277
10	210	230	...a	...a	225	235	240	260	300	310	340	350	350	360	390	310	295	300	250	270	255	270	270	240	...
11	230	265	285	235	230	235	230	220	300	330	310	320	320	310	310	295	290	260	220	230	240	245	280	260	269
12	250	250	270	265	255	250	245	295	280	310	295	350	345	320	330	325	290	290	265	270	280	290	250	255	284
13	240	250	240	230	235	260	280	290	325	305	300	310	315	310	310	290	280	260	260	250	250	250	265	p250a	273
14	240	260	265	255	235	280	260	310	310	310	360	330	370	375	350	325	275	270	220	230	240	230	220	235	281
15	245	260	250	245	235	230	225	250	330	305	...c	...c	350	335	295	300	295	300	270	240	245	250	255	270	...
16	240	p235a	230	220	260	265	220	450	440	415	365	390	340	350	330	300	290	300	280	250	260	270	235	230	297
17	240	250	255	255	255	295	250	220	425	...c	...c	530	410	440	360	360	340	395	p325a	255	250	280	290	230	...
18	...a	...a	...a	270	290	...a	...a	200	...c	...c	370	410	330	340	300	290	295	340	270	260	250	255	270	240	...
19	250	280	240	260	260	285	330	380	420	370	420	375	335	...c	390	325	310	290	265	250	230	245	295	275	...
20	315	285	265	250	245	225	230	225	335	335	310	320	300	275	280	285	280	265	220	245	235	245	250	235	269
21	250	p250a	250	230	240	250	240	310	310	305	320	295	320	315	285	285	290	290	240	235	220	255	250	270	271
22	255	240	235	240	p240c	...c	...c	...c	320	330	335	315	335	320	295	290	295	260	230	250	255	240	270	p270a	...
23	270	260	220	240	220	230	235	315	365	305	320	290	310	290	300	285	285	245	220	200	240	250	255	260	267
24	260	250	...a	...a	260	240	230	220	320	325	310	320	320	330	270	275	280	275	220	230	205	240	230	245	...
25	230	240	255	240	260	230	240	260	190	420	390	370	360	345	330	320	310	280	225	230	220	245	255	295	281
26	250	240	250	240	265	260	380	300	290	p340c	400	370	350	320	295	300	270	270	210	...a	...a	225	240	260	...
27	270	255	250	230	260	...a	230	280	340	460	470	480	460	400	350	320	315	315	210	235	220	225	270	265	...
28	245	240	250	270	245	240	235	225	340	300	410	p415c	420	380	340	350	320	p320	250	p245a	240	260	225	250	292
29	250	230	210	...a	...a	280	240	280	270	510	...	...	515	550	450	450	340	325	270	p260a	250	260	250	245	...
30	230	255	260	255	245	250	240	220	350	405	330	350	350	300	300	300	280	295	250	240	250	250	255	245	279
31	250	245	250	240	*250	270	260	450	570	620	...c	450	445	450	430	370	390	335	220	250	235	230	260	255	...
MEAN*	252	256	257	251	254	257	259	239	330	370	349	361	356	354	337	319	305	295	253	245	244	257	258	258	290

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 177

JANUARY 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.2	4.5	4.7	4.8	4.9	5.0	4.8	p4.6a	4.5	4.5	4.3	...
2	...	...	4.5	p4.8c	5.0	5.0	4.8	5.1	5.0	4.8	4.5	4.2	3.6
3	3.3	3.8	4.2	4.3	4.6	...a	p4.8a	4.5	4.7	4.5	4.3	4.1	3.4
4	3.3	4.0	4.1	...c	...c	...c	...c	4.5	4.5	4.6	4.4	4.1	3.6
5	...	...	4.5	4.7	...a	5.0	5.0	...a	4.8	...a	4.6	...a	...
6	...	4.0	...a	4.6	...c	...c	4.8	4.7	4.7	...a	...a	4.2	...a
7	...	...	...	4.6	4.7	4.8	...a	...a	4.9	4.7	4.5	4.3	...
8	...	...	...	5.0	4.7	4.8	5.0	...c	...c	4.8	4.5	4.3	...
9	...	...	4.3	4.9	4.8	4.8	4.8	...a	...c	4.7	4.6	4.2	...
10	...	4.1	4.5	4.5	4.8	4.9	4.8	4.8	4.6	4.6	4.4	4.2	...
11	...	...	4.3	4.8	4.8	5.0	5.0	5.1	4.9	4.9	4.6	4.2	...
12	...	4.1	4.3	...a	...a	5.0	5.0	4.8	4.8	4.8	4.4	4.2	3.6
13	3.3	4.2	4.6	4.7	4.8	4.9	4.9	4.9	4.8	4.8	4.3	4.0	3.6
14	3.3	4.1	4.3	4.6	4.7	p4.8a	4.8	4.9	4.7	4.6	4.5	4.2	...
15	...	...	4.6	4.7	p4.8c	p4.9c	4.9	5.0	4.8	4.6	4.4	4.0	3.4
16	...	4.1	4.2	4.3	4.4	4.6	4.7	4.8	4.6	4.6	4.3	4.0	...
17	...	...	4.2	...c	...c	4.5	4.6	4.7	4.6	4.3	4.3	4.1	...
18	...	...	4.1	4.2	4.5	4.7	4.7	4.8	4.7	4.5	4.3	4.4	...
19	...	3.9	4.2	4.4	4.5	4.6	4.6	p4.6	4.6	4.5	4.4	4.0	3.3
20	...	...	4.5	4.5	4.7	4.8	4.9	4.6	4.8	4.6	4.5	4.0	...
21	...	4.0	4.3	4.6	4.7	4.8	4.8	4.7	4.6	4.6	4.5	4.1	...
22	...	...	4.3	4.5	4.6	4.7	4.7	4.8	4.7	4.6	4.3	3.6	...
23	...	4.0	4.9	4.5	4.8	5.0	4.8	4.9	4.7	4.7	4.4	4.2	...
24	...	...	4.4	4.7	4.8	4.8	4.8	4.8	4.4	4.5	4.5	4.0	...
25	2.9	3.7	4.1	4.5	4.6	4.7	4.7	4.7	4.6	4.5	4.5	4.1	...
26	3.2	3.8	4.2	4.6	4.7	4.7	4.8	4.6	4.6	4.5	4.4	4.0	...
27	...	3.7	4.2	4.3	4.5	4.5	4.6	4.5	4.5	4.4	4.3	4.1	...
28	...	...	4.2	4.5	4.5	4.6	4.6	p4.6a	4.6	4.4	4.2	...a	...
29	...	3.7	4.1	4.5	4.5	4.5	4.5	p4.5c	4.4	4.4	p4.2	4.0	...
30	...	...	4.3	4.5	4.5	4.7	4.6	4.5	4.7	4.5	4.3	4.1	3.3
31	...	3.7	4.0	4.2	4.3	4.5	4.5	4.5	4.4	4.4	4.3	4.0	...
* MEAN	3.2	4.0	4.3	4.6	4.7	4.6	4.8	4.7	4.7	4.6	4.3	4.1	3.5

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	210	220	215	200	200	p200a	205	...a	...a	...a	...a	...
2	...	...	230	...c	...a	180	175	230	225	235	215	215	220
3	230	220	200	205	...a	...a	p215a	...a	...h	...a	...a	220	235
4	250	225	...a	...c	...c	...c	...c	...a	230	225	230	230	230
5	...	...	...a	230	...a	...a	...a	...a	...a	...a	...a	...a	...
6	...	230	...a	230	...c	...c	...a	...a	...a	...a	...a	240	...a
7	...	...	...a	200	200	...a	...a	...a	225	...a	...a	235	...
8	...	...	...	...h	...h	195	200	...c	...c	...c	225	220	...
9	...	...	...h	215	255	225	225	...a	...a	...a	230	220	...
10	...	215	225	210	225	,210	...a	...a	240	220	225	240	...
11	...	...	220	210	190	185	p205a	220	230	215	p220a	230	...
12	...	230	...a	...a	...a	p195a	...a	...a	220	230	225	235	235
13	230	220	200	225	p205a	185	210	220	210	215	215	225	240
14	230	225	230	...a	...a	...a	185	...a	230	...a	225	220	...
15	...	...	210	210	...c	...c	...a	200	...h	210	220	210	230
16	...	200	210	215	190	200	p205a	210	210	245	...c	230	...
17	...	...	210	...c	...c	185	180	220	220	210	220	215	...
18	...	...	200	195	...	200	210	200	220	210	215	...a	...
19	...	240	210	195	200	180	160	...c	205	210	210	215	225
20	...	...	225	200	200	195	...a	...a	255	...a	200	215	...
21	...	240	230	225	210	200	220	220	200	180	200	210	...
22	...	...	220	210	205	200	185	190	195	190	215	210	...
23	...	225	250	225	200	190	190	195	200	220	220	220	...
24	...	...	200	225	245	200	200	200	195	195	230	200	...
25	220	190	...	190	180	200	200	215	230	215	220	...a	...
26	240	...a	200	210	200	195	215	230	...a	220	...a	200	...
27	...	225	190	210	215	...a	195	...a	...a	...a	215	...a	...
28	...	...	...a	...a	...a	195	...a	...a	...a	215	220	...a	...
29	...	200	210	...a	210	...a	...a	...c	...a	...a	230	...a	...
30	...	...	200	...a	...a	200	200	200	215	200	205	210	220
31	...	230	215	195	185	210	...a	205	195	200	220	215	...
* MEAN	233	220	214	211	206	197	199	210	218	213	219	220	229

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 178

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1942 JANUARY 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.7	0.6	0.8	0.8	1.1	1.1	0.9	1.0	1.1	1.0	0.8	0.7
2	0.6	0.7	0.8	p0.9c	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.8
3	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.9	0.8	0.8	0.7	0.6
4	0.7	0.7	0.8	...c	...c	...c	...c	0.8	0.9	0.9	0.8	0.8	0.7
5	0.7	0.8	0.8	1.0	0.8	0.8	0.8	0.8	p0.8c	0.8	0.8	0.7	0.5
6	...e	0.7	0.8	0.8	...c	...c	0.9	0.8	0.9	0.9	0.8	0.8	0.7
7	...	...	0.7	0.8	0.9	0.9	0.9	0.8	0.9	1.0	0.8	0.7	0.6
8	0.7	0.8	0.8	0.7	0.7	0.8	0.8	...c	...c	...c	0.8	0.8	...e
9	...e	0.8	0.7	0.8	0.8	0.8	0.8	0.9	p0.9c	0.8	0.9	0.7	0.6
10	...e	0.6	0.7	0.9	0.9	1.0	1.1	1.0	1.0	0.8	0.8	0.7	0.6
11	0.7	0.7	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.9	0.8	0.7
12	0.6	0.7	0.8	1.0	1.1	0.9	0.9	1.0	1.0	0.9	0.8	0.9	0.8
13	0.6	0.6	0.7	0.7	0.7	0.9	0.8	1.0	1.0	0.9	0.8	0.8	0.8
14	0.8	0.7	0.7	0.8	0.9	1.0	1.0	0.9	1.0	0.8	0.7	0.7	0.6
15	0.8	0.8	0.8	p0.8c	...c	...c	1.0	0.8	0.9	0.8	0.7	0.7	0.6
16	...e	0.6	0.7	0.8	0.8	0.8	0.8	0.8	...c	...c	...c	...c	...e
17	0.6	0.7	0.8	...c	...c	1.0	1.0	1.6	1.1	1.0	0.8	0.7	0.7
18	0.6	0.7	0.8	0.9	1.0	0.9	0.8	1.9	1.0	0.9	0.8	0.8	0.7
19	0.7	0.8	0.9	1.0	1.0	1.0	1.0	p1.0c	1.0	0.8	0.8	0.9	0.7
20	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.7
21	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7
22	...c	...c	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.7	0.5
23	0.8	0.7	0.7	0.8	1.0	1.0	1.0	0.9	1.0	1.0	1.0	0.7	...e
24	...e	0.7	0.8	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.7	...e
25	0.6	0.7	0.7	0.9	1.0	1.0	0.9	1.0	0.7	0.7	0.7	0.7	...e
26	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7
27	0.7	0.7	0.8	0.7	0.8	0.9	1.0	1.0	0.8	0.8	0.8	0.7	0.7
28	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.1	0.8	0.8	0.8	0.7
29	0.7	0.8	0.8	0.8	1.0	1.1	1.0	1.1	1.0	1.0	0.8	0.9	0.7
30	...e	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7
31	...e	0.7	0.7	0.8	0.8	0.9	1.0	0.8	0.8	0.8	p0.8c	0.8	0.6
MEAN*	0.6	0.7	0.8	0.9	0.9	1.0	0.9	1.0	0.9	0.9	0.8	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.0	2.5	2.8	3.1	3.2	3.4	3.6	3.5	p3.5a	3.5	3.2	2.9	2.3
2	2.0	2.7	3.1	p3.4c	3.6	3.6	3.5	3.6	3.5	3.3	3.0	2.7	1.8
3	2.1	2.7	3.0	3.2	3.1	3.5	3.5	3.2	3.0	...a	...a	2.8	2.2
4	...a	p2.5a	...a	...c	...c	...c	...c	3.6	3.5	3.4	3.2	2.9	2.2
5	2.1	2.5	3.0	3.3	3.4	3.5	3.5	3.6	p3.5a	3.5	3.3	2.9	2.4
6	...	p1.6	...a	...a	...c	...c	3.6	3.5	3.4	3.3	3.0	2.6	...a
7	...	...	...a	3.3	3.5	3.6	3.7	3.5	3.3	3.0	2.5	2.6	2.0
8	2.1	2.7	3.0	3.3	3.5	3.5	3.7	...c	...c	3.3	2.9	...a	...a
9	2.1	2.8	3.1	3.4	3.6	3.7	3.7	3.6	p3.4c	3.2	2.6	3.0	2.4
10	2.2	2.6	3.1	3.2	3.6	3.6	3.7	3.7	3.6	3.5	3.2	2.9	2.2
11	2.0	2.5	3.1	3.4	3.4	3.6	3.6	3.7	3.7	3.6	3.2	3.0	2.3
12	2.1	2.7	3.1	3.4	3.5	3.6	3.8	3.7	3.6	3.6	3.3	3.0	2.4
13	2.1	2.6	2.9	3.4	3.5	3.6	3.7	3.6	3.3	3.3	3.3	3.0	2.4
14	2.2	2.7	3.3	3.3	3.7	3.6	3.7	3.6	3.7	3.5	3.3	3.0	2.3
15	2.1	2.5	2.9	3.3	p3.5c	p3.6c	3.7	3.7	3.6	3.5	3.2	3.0	2.3
16	2.1	2.4	2.7	3.0	3.2	3.5	3.2	3.6	3.6	3.4	3.2	2.8	2.2
17	2.3	2.6	3.1	...o	...c	3.5	3.7	3.7	3.6	3.4	3.3	2.9	2.2
18	1.7	2.5	2.9	3.2	3.3	3.6	3.7	3.6	3.7	3.4	3.1	2.8	2.2
19	1.6	2.7	3.0	3.2	3.3	3.6	3.8	p3.7c	3.6	3.3	3.2	2.9	2.4
20	2.0	2.5	3.0	3.1	3.3	3.5	3.7	3.5	3.5	3.4	3.2	2.8	2.3
21	2.0	2.5	2.9	3.3	3.4	3.5	3.5	3.3	3.3	3.1	2.9	2.8	2.0
22	...c	...c	3.2	3.5	3.5	3.4	3.5	3.5	3.3	3.1	3.1	2.8	2.3
23	2.0	2.5	2.6	3.3	p3.4a	3.6	3.5	3.5	3.6	3.3	3.2	2.5	2.3
24	1.9	2.6	3.0	3.3	3.3	3.4	3.3	3.2	3.5	3.4	3.0	2.8	2.2
25	2.0	2.6	2.9	3.3	3.5	3.7	3.7	3.7	3.4	3.2	3.2	2.7	1.9
26	1.8	2.3	2.8	3.2	3.4	3.4	3.5	3.4	3.5	3.3	2.8	2.0	...a
27	...a	2.4	3.0	3.2	3.5	3.5	3.6	3.6	3.6	3.4	3.2	2.7	2.2
28	1.3	2.5	p3.0a	3.3	3.5	3.5	3.6	3.7	3.6	3.2	3.2	p3.0a	2.3
29	1.8	2.3	2.8	3.0	3.0	3.5	3.5	3.6	3.6	3.4	3.1	2.6	1.8
30	1.9	2.5	2.9	3.2	3.6	3.4	3.3	3.5	...a	...a	3.2	2.8	2.2
31	...	2.4	2.8	2.9	3.2	3.4	3.5	p3.5a	3.2	3.0	2.9	2.8	2.2
MEAN*	2.0	2.5	3.0	3.2	3.4	3.5	3.6	3.6	3.5	3.3	3.1	2.8	2.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT. g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 179

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — FEBRUARY 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.8	4.7	4.1	4.2	4.1	4.0	4.6	5.6	6.3	6.5	6.6	7.5	8.1	7.4	7.4	7.5	6.7	6.4	5.9	5.4	5.8	5.8	5.7	5.4	5.8
2	4.9	4.8	4.6	4.2	4.0	3.6	4.5	5.6	p5.9c	6.1	6.9	7.4	7.0	6.8	7.5	7.7	7.1	6.8	7.6	7.0	5.8	6.2	5.5	5.1	5.9
3	5.5	4.9	4.2	3.9	4.2	3.9	p4.2c	4.5	4.9	5.5	6.2	5.9	5.7	p5.8a	5.8	6.1	5.7	5.4	5.2	5.2	5.4	4.9	4.8	5.0	5.1
4	5.1	5.3	3.7	3.0	2.9	2.7	4.4	5.0	6.0	6.6	7.3	7.8	7.7	...a	...a	...a	6.7	5.6	5.0	5.1	5.6	5.2	p5.0c	4.6	...
5	p4.7f	4.8	3.6	3.0	2.9	2.9	3.7	5.2	5.4	5.3	...c	...c	9.2	9.3	9.5	8.7	8.2	7.0	6.5	5.5	6.5	5.7	6.2	p6.6f	...
6	7.0	5.3	3.5	2.6	2.7	2.5	3.9	4.7	4.6	5.4	5.5	5.9	6.8	7.0	7.4	6.8	5.6	p5.6c	5.7	5.5	6.4	6.4	6.1	6.3	5.4
7	5.8	4.3	4.4	4.0	3.6	3.2	3.6	4.3	...a	...c	...c	...c	...c	...c	...c	5.8	5.5	5.4	4.9	5.0	5.4	5.5	5.7	5.3	...
8	5.1	4.2	...f	...f	2.4	2.0	3.6	5.1	5.5	5.7	6.1	6.6	7.0	7.3	7.2	6.8	6.6	6.2	6.2	6.0	6.0	5.5	4.5	4.9	...
9	4.7	4.7	...f	3.9	3.3	2.7	4.2	5.1	5.5	6.2	6.6	7.5	7.6	7.0	6.9	6.8	6.7	6.1	6.2	6.1	6.0	5.5	5.5	5.6	...
10	5.2	5.1	5.2	4.3	3.9	3.3	4.1	5.3	6.0	5.8	6.2	6.3	6.7	7.1	7.1	7.5	7.1	7.0	6.8	6.2	5.6	5.0	4.9	4.7	5.7
11	4.8	p4.6f	4.4	4.3	4.2	3.6	4.7	6.1	6.7	8.2	8.3	p8.1	8.5	8.8	8.7	8.7	9.0	8.3	6.9	5.8	5.2	5.0	4.7	4.5	6.3
12	4.5	...f	...f	3.3	2.9	3.0	3.4	4.3	p5.1a	5.5	p5.3	5.2	6.0	6.2	6.9	7.1	6.9	6.6	6.4	5.8	4.9	4.3	3.9	4.0	...
13	4.0	3.7	3.6	3.6	3.3	3.2	4.3	5.7	6.4	6.5	6.6	7.3	7.6	7.8	8.4	8.7	8.0	8.0	8.0	7.5	5.9	5.0	4.9	p4.8f	6.0
14	4.7	4.5	4.3	4.0	3.4	3.1	4.2	5.8	6.5	7.2	7.2	7.5	7.6	8.0	8.1	8.3	8.3	7.6	7.8	7.7	7.0	6.0	5.5	5.1	6.2
15	...f	...f	...f	...f	...f	3.0	4.3	5.6	7.0	8.2	8.1	8.8	9.6	9.5	8.5	8.0	8.3	7.5	7.0	7.0	6.3	5.9	5.5	5.4	...
16	4.9	5.0	4.6	3.8	3.4	2.7	3.7	5.0	5.6	6.0	7.0	8.6	8.7	8.7	8.2	8.2	8.2	7.0	6.3	5.8	5.7	5.3	5.3	4.7	5.9
17	4.8	4.7	4.5	4.0	3.0	2.9	4.2	5.4	6.6	7.6	8.4	7.7	8.1	8.7	9.5	9.9	9.1	p8.5c	6.7	5.8	5.7	5.3	5.1	5.0	6.3
18	5.0	4.6	3.8	3.4	3.1	3.0	4.2	5.5	6.6	...c	...c	...c	8.3	8.0	8.6	8.7	8.1	7.1	6.9	6.3	5.2	4.7	4.3	4.4	...
19	4.4	4.4	4.1	3.7	3.3	p3.6c	4.7	4.8	5.4	p6.1c	6.5	7.1	7.2	7.8	8.6	8.9	7.8	7.0	6.6	5.9	5.2	4.5	4.3	4.2	5.7
20	4.0	3.9	3.8	3.8	3.7	3.7	4.8	5.6	5.8	6.5	6.6	6.6	6.6	6.7	7.2	8.0	7.8	6.9	6.3	6.0	6.1	6.0	5.7	5.7	5.7
21	5.8	5.4	5.3	5.3	5.0	4.9	5.2	6.2	7.0	7.4	7.7	8.8	8.3	8.0	8.5	8.8	7.0	6.3	7.8	6.6	5.8	5.5	5.2	5.2	6.5
22	4.7	4.2	4.2	4.0	4.1	3.6	4.3	6.3	6.6	6.6	6.3	6.6	7.8	8.7	8.8	8.2	7.8	7.0	7.0	7.6	6.1	5.6	5.6	5.3	6.1
23	4.8	4.4	...f	...f	4.0	3.9	4.3	5.7	6.3	...c	...c	9.1	8.7	9.0	9.8	8.7	7.5	6.3	6.2	6.5	5.8	5.0	4.4	4.6	...
24	3.9	3.7	3.5	3.4	3.0	3.0	2.9	...g	...g	...g	...g	...g	5.0	5.1	5.2	5.2	5.5	4.7	4.9	4.7	5.2	4.2	4.0	3.6	...
25	3.4	3.2	3.1	2.9	2.7	2.5	3.0	4.2	4.4	...c	...c	...c	...c	...c	7.3	6.9	7.2	6.7	6.3	6.3	6.2	5.5	5.0	4.2	...
26	3.8	3.7	3.5	3.5	3.3	3.2	4.2	5.7	6.8	7.6	10.2	8.3	8.6	8.7	8.8	8.9	8.3	7.8	7.6	6.9	5.8	4.6	4.3	4.4	6.2
27	4.3	4.2	4.0	4.0	3.4	3.3	4.3	5.0	5.9	7.0	8.0	...c	...c	...c	8.3	8.7	8.2	7.5	7.5	7.6	7.0	5.6	5.0	4.8	...
28	5.0	4.9	4.3	3.6	3.2	3.5	4.5	5.3	5.6	6.1	6.8	7.8	7.3	8.1	8.3	8.8	8.0	7.4	7.3	6.9	6.2	5.8	5.5	5.0	6.0
29																									
30																									
31																									
MEAN*	4.8	4.5	4.1	3.8	3.4	3.2	4.1	5.3	5.9	6.5	7.0	7.4	7.6	7.8	7.9	7.9	7.4	6.8	6.6	6.2	5.8	5.3	5.1	4.9	5.8

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 180

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — FEBRUARY 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	230	225	220	235	220	240	230	295	320	355	320	300	310	340	...a	290	275	260	240	240	290	260	280	...
2	250	230	270	...a	240	240	230	295	...c	365	320	310	335	350	325	320	290	320	230	225	230	235	250	310	...
3	250	255	p250a	250	255	...a	...c	365	395	375	...c	...c	365	...a	...c	340	350	275	210	245	215	265	265	250	...
4	240	215	190	250	250	260	235	p260a	320	330	310	265	315	...a	...a	...a	290	220	...a	...a	...a	260	p265c	...a	...
5	245	230	200	p240a	275	270	250	230	325	350	...c	...c	305	290	290	290	290	270	230	245	255	300	310	...a	...
6	235	230	p255a	285	p290a	295	250	...a	550	...a	460	430	385	340	300	300	320	p285c	250	250	270	255	280	240	...
7	p240c	240	290	285	260	250	285	220	...a	...c	...c	...c	...c	...c	...c	360	300	295	230	255	265	290	280	275	...
8	240	230	p255a	280	250	285	245	295	300	350	p335a	320	300	315	300	310	300	265	250	240	230	230	285	270	278
9	230	230	...a	...a	250	250	235	220	320	330	350	310	300	330	320	320	300	280	p265a	250	220	245	270	245	...
10	250	265	255	255	260	240	255	275	275	350	280	325	325	300	300	295	290	270	250	220	230	250	p265a	280	273
11	290	265	...a	...a	280	250	240	235	280	250	275	305	310	300	295	295	280	245	235	210	235	240	270	295	...
12	275	245	p220a	200	280	280	250	390	p360a	330	p430c	...a	365	370	325	300	295	270	220	p210a	200	260	275	270	...
13	290	250	250	250	p250a	250	255	220	275	295	335	300	310	320	310	280	290	275	230	p210a	190	280	p280a	285	270
14	270	245	240	225	230	220	240	230	275	250	290	p290c	295	310	p300a	295	280	240	p230a	220	210	220	...a	...a	...
15	...a	...a	...a	...a	245	250	240	...a	...a	...a	...a	...a	290	270	310	300	270	280	230	220	230	245	250	270	...
16	p260a	250	200	265	230	260	240	200	295	p305c	320	280	290	285	290	290	265	230	230	225	270	280	290	265	263
17	260	...a	...a	215	225	260	240	240	280	275	270	300	...c	...c	310	275	260	p250c	235	220	245	p260a	275	p260a	...
18	240	220	200	215	250	p245c	...c	...c	280	...c	...c	...c	275	285	295	265	275	260	240	215	225	240	260	270	...
19	260	245	220	215	220	p245c	225	215	330	p300c	300	300	315	310	280	270	240	250	230	220	230	245	p255a	265	258
20	265	265	240	235	250	235	p230a	230	270	270	285	300	305	325	320	280	265	230	230	230	225	245	250	245	259
21	240	240	245	240	240	250	240	240	275	260	315	270	290	330	320	...a	...a	245	260	230	255	265	265	260	...
22	...a	...a	...a	...a	...a	...a	250	230	240	370	280	...c	325	290	280	290	270	225	240	230	230	p240a	250	250	...
23	230	250	260	250	270	p265a	260	235	230	...c	...c	280	280	305	270	265	225	230	245	235	225	240	260	275	...
24	...a	320	300	290	280	300	340	...	...	...	...	...	525	515	480	460	350	230	270	255	240	265	255	270	...
25	275	280	...a	...a	...a	260	280	250	230	...c	...c	...c	...c	...c	315	310	290	235	240	235	240	240	255	235	...
26	275	255	270	260	250	260	250	235	280	300	250	260	295	300	300	270	270	p255a	240	215	210	210	260	275	260
27	260	255	255	225	255	250	230	235	315	300	295	...c	...c	...c	310	285	265	230	250	230	220	210	245	265	...
28	260	270	255	270	260	290	275	240	340	335	320	305	300	280	295	280	270	235	250	225	240	250	260	285	275
29																									
30																									
31																									
MEAN*	256	248	243	246	253	257	250	251	306	315	319	304	321	320	311	302	284	256	240	230	232	252	266	268	272

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 181

FEBRUARY 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.4	4.4	4.6	4.6	4.6	4.6	...a	...a	4.4	4.1	...
2	...	4.0	...c	4.6	4.4	4.7	4.8	4.6	4.6	4.5	4.4	4.3	...
3	...	3.7	4.1	4.3	...c	...c	4.5	...a	...c	4.4	4.2	4.0	...
4	...	...	4.3	4.5	4.7	4.7	...a	...a	...a	...a	4.4	...	...
5	...	...	4.3	4.5	...c	...c	4.7	4.6	4.6	4.7	4.5	4.0	...
6	...	...	4.2	...a	...a	4.5	4.5	4.5	4.5	4.5	4.4	...	...
7	...	...	...a	...c	...c	...c	...c	...c	...c	4.5	4.2	4.0	...
8	...	3.9	4.2	4.5	...a	4.6	4.7	4.8	4.7	4.7	4.4	3.9	...
9	...	...	4.3	4.7	4.5	4.7	4.7	4.7	4.7	4.5	4.4	...	...
10	...	3.7	4.2	4.5	4.7	4.7	4.8	4.9	4.7	4.6	4.4	4.1	...
11	...	...	...a	4.4	...a	4.8	4.8	4.7	4.6	4.5	4.4	...	...
12	...	3.6	...a	...a	4.5	...a	...a	4.6	4.5	...a	...	...	...
13	...	...	4.2	4.4	4.8	4.7	4.7	4.7	4.6	4.5	4.3	4.1	...
14	...	...	4.3	4.5	4.6	4.7	4.7	4.8	p4.6a	4.4	4.3	...	...
15	...	...	...a	...a	...a	...a	4.6	4.8	4.8	4.6	4.3	4.0	...
16	...	...	4.2	...c	4.6	4.6	4.8	4.7	4.7	4.6	4.3	...	...
17	...	...	4.3	4.5	4.6	4.8	4.8	p4.8c	4.8	4.6	4.2	...c	...
18	...	...	4.2	...c	...c	...c	4.8	4.6	4.5	4.5	...c	4.0	...
19	...	...	4.2	4.5	4.5	4.7	4.8	4.7	4.5	4.5	4.3	3.9	...
20	...	...	4.1	4.3	4.6	4.7	4.8	4.8	4.6	4.4	4.3	...	...
21	...	...	4.3	4.5	4.7	4.7	...a	...a	...a	...a	...a	...	...
22	...	...	...	4.5	p4.5a	4.6	4.6	4.7	4.6	4.6	4.3	...	...
23	...	...	...	...c	...c	4.6	p4.8a	4.9	4.7	4.5	...	...	...
24	...	3.2	3.7	4.0	4.1	4.2	4.3	4.4	4.4	4.4	4.2	...	...
25	...	...	...	...c	...c	...c	...c	...c	4.9	4.7	4.4	...	...
26	...	...	4.3	4.8	4.8	4.8	4.8	4.9	4.9	4.6	4.3	...a	...
27	...	...	4.4	4.6	4.8	...c	...c	...c	5.0	4.7	4.3	...	...
28	...	...	4.3	4.5	4.7	4.8	4.9	4.8	4.8	4.8	4.3	...	...
29													
30													
31													
* MEAN	...	3.7	4.2	4.5	4.6	4.7	4.7	4.7	4.7	4.6	4.3	4.0	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	215	215	...a	180	...a	215	...a	...a	200	200	...
2	...	210	...c	...a	...a	250	...a	...a	...a	210	...a	...a	...
3	...	230	195	225	...c	...c	...a	...a	...c	220	225	225	...
4	...	...	230	205	...a	...a	...a	...a	...a	...a	230	...	...
5	...	...	200	215	...c	...c	210	210	230	200	200	210	...
6	...	...	...a	...a	...a	...a	...a	210	215	200	230	...	...
7	...	...	...a	...c	...c	...c	...c	...c	...c	200	210	220	...
8	...	245	230	210	...a	...a	195	...a	200	...a	220	...a	...
9	...	...	200	200	...a	...a	190	200	195	...a	...a	...	...
10	...	225	230	...a	...a	...a	...a	...a	200	...a	...a	225	...
11	...	...	...a	...a	...a	...a	...a	225	220	220	...a	...	...
12	...	...a	...a	...a	200	...a	...a	...a	...a	...a	...	...	...
13	...	...	...a	220	195	...a	...a	...a	225	240	215	210	...
14	...	...	215	210	185	190	180	...a	...a	220	225	...	...
15	...	...	...a	...a	...a	...a	190	220	200	240	200	225	...
16	...	...	190	p195c	200	p195c	190	220	230	230	230	...	...
17	...	...	215	220	225	200	180	p205c	230	p220c	210	...c	...
18	...	...	220	...c	...c	...c	...c	200	195	205	...c	215	...
19	...	...	200	225	190	190	195	225	215	200	210	225	...
20	...	...	225	200	175	200	185	175	190	280	225	...	...
21	...	...	230	235	p215a	200	...a	...a	...a	...a	...a	...	...
22	...	...	...	...a	...a	...a	200	240	...a	...a	220	...	...
23	...	...	...	...c	...c	...a	...a	175	235	235	...	...	...
24	...	275	250	220	225	190	225	265	225	240	235	...	...
25	...	...	...	...c	...c	...c	...c	...c	...a	210	225	...	...
26	...	...	220	225	p210a	200	180	190	230	220	210	...a	...
27	...	...	230	230	215	...c	...c	...c	220	210	215	...	...
28	...	...	220	210	200	230	200	190	210	245	...a	...	...
29													
30													
31													
* MEAN	...	237	218	215	203	202	194	210	215	222	218	217	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 182

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1942 FEBRUARY 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.5	p0.7c	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.6
2	0.7	0.8	...c	1.0	0.9	1.1	1.0	1.0	1.0	0.8	0.8	0.7	0.7
3	...e	0.6	0.7	0.7	...c	...c	0.8	1.0	0.8	0.8	0.8	0.7	0.8
4	0.7	0.7	0.7	0.8	0.8	1.1	1.0	1.0	1.0	1.0	0.8	0.7	0.7
5	...e	0.7	0.7	0.8	...c	...c	0.9	1.0	1.0	0.8	0.8	0.8	0.7
6	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.8	1.0	1.0	0.9	p0.8c	0.7
7	0.7	0.8	0.8	...c	...c	...c	...c	...c	...c	1.0	0.8	0.8	0.7
8	0.6	0.7	0.8	0.8	0.8	0.8	0.9	1.1	p1.1c	1.1	1.1	0.8	0.7
9	0.7	0.8	0.7	0.9	0.8	1.0	0.9	0.8	0.9	0.8	0.8	0.8	...e
10	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
11	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	1.2	1.0	0.8	0.7	0.8
12	0.6	0.7	0.7	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.8	0.7	0.7
13	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7
14	0.8	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.0	0.8	0.7	0.8	0.7
15	0.7	0.8	0.8	0.8	0.8	1.0	0.8	1.0	0.8	0.8	0.8	0.8	0.7
16	0.7	0.8	0.8	0.8	1.0	1.0	1.1	1.0	1.0	0.9	0.8	0.8	0.7
17	0.7	0.7	0.8	0.8	0.9	1.0	1.0	...c	1.0	0.8	0.8	...c	0.7
18	...c	...c	0.7	...c	...c	...c	0.8	0.8	0.8	0.8	0.8	0.7	...e
19	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...e
20	...e	0.7	0.7	0.9	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.7	0.6
21	0.6	0.7	0.7	1.1	0.8	0.8	1.0	1.0	0.9	1.0	1.0	0.7	0.7
22	...e	0.7	0.8	0.9	1.0	1.1	1.1	1.0	1.0	1.0	0.8	0.7	0.7
23	0.7	0.6	0.7	...c	...c	1.0	0.9	0.9	0.8	0.9	0.8	0.8	0.7
24	0.6	0.7	0.8	0.8	1.1	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7
25	0.7	0.7	0.8	...c	...c	...c	...c	...c	1.0	1.0	0.8	0.7	0.6
26	0.7	0.7	0.8	0.8	0.8	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.7
27	0.8	0.6	0.7	0.9	1.0	...c	...c	...c	0.9	1.0	0.8	0.8	0.7
28	0.6	0.6	0.7	0.7	0.9	0.7	0.9	1.0	1.1	1.0	0.9	0.7	0.7
29													
30													
31													
MEAN*	0.7	0.7	0.8	0.9	0.9	1.0	0.9	1.0	1.0	0.9	0.8	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.9	2.4	2.9	3.2	3.5	3.4	3.4	...a	...a	...a	2.4	2.8	2.2
2	1.6	2.3	p2.7c	3.1	3.3	3.5	3.5	3.6	3.5	3.2	3.0	2.7	2.1
3	...	2.3	2.7	3.1	...c	...c	3.4	3.5	p3.2a	3.0	3.0	p2.6a	2.2
4	1.6	2.4	2.9	3.1	3.3	3.3	3.4	3.6	3.3	2.9	3.1	2.9	2.3
5	1.6	2.3	2.9	3.1	...c	...c	...a	3.5	3.5	3.4	3.2	2.8	2.4
6	...a	...a	...a	2.5	...a	3.1	3.4	...a	3.3	3.3	3.0	p2.7c	2.3
7	1.8	2.2	2.8	...c	...c	...c	...c	...c	...c	3.5	3.2	2.5	2.2
8	...a	2.4	2.8	3.2	3.2	3.4	3.3	3.3	p3.2a	3.1	2.9	2.9	...a
9	1.9	2.4	2.8	3.1	3.2	...a	...a	3.1	3.4	3.5	3.4	2.8	...
10	2.0	2.4	2.7	3.1	3.2	3.5	3.6	3.6	3.6	3.4	3.2	2.8	2.2
11	1.7	2.4	2.8	3.2	3.4	3.5	3.5	3.0	3.1	p3.2a	3.2	2.8	2.1
12	1.5	1.9	2.5	2.8	3.4	3.5	3.6	3.6	3.6	3.5	3.2	2.7	...a
13	1.5	2.3	2.8	3.0	3.0	...a	...a	...a	3.5	3.4	3.1	2.6	2.0
14	1.6	2.4	3.0	3.1	3.2	p3.4a	3.6	p3.4a	3.2	p3.1a	3.0	...a	...a
15	1.6	2.3	2.7	3.2	3.1	3.3	...a	...a	3.3	3.3	3.1	2.7	2.1
16	1.7	2.1	2.7	3.1	3.3	3.3	3.3	3.3	3.4	3.3	3.1	p2.9c	2.1
17	1.4	2.4	3.0	2.9	3.3	3.5	...a	...c	3.0	2.9	3.1	...c	...a
18	...c	2.1	2.7	...c	...c	...c	3.3	3.3	3.4	3.3	...c	2.7	2.1
19	1.5	2.3	2.7	3.1	3.3	3.3	3.4	3.3	2.9	3.4	3.0	2.7	2.1
20	...	2.6	3.0	p3.2a	3.3	3.5	3.3	3.5	3.6	3.4	3.1	2.7	2.0
21	1.4	2.2	2.9	3.3	3.3	3.2	3.5	3.7	3.6	3.3	3.2	2.7	2.1
22	1.3	2.3	2.8	3.1	3.3	3.3	3.2	3.3	3.3	3.4	3.2	2.8	2.1
23	1.5	2.3	2.8	...c	...c	3.3	3.2	3.6	3.3	3.5	3.2	2.8	2.1
24	1.5	2.4	2.8	3.1	3.4	3.4	3.2	3.5	3.5	3.4	3.1	2.7	2.1
25	1.7	2.5	2.9	...c	...c	...c	...c	...c	3.1	3.1	3.1	2.7	2.0
26	1.6	2.2	2.7	3.1	3.4	3.3	3.2	3.4	3.3	3.3	3.1	p2.6a	2.1
27	1.5	2.3	2.9	3.1	3.3	...c	...c	...c	3.3	3.3	3.1	2.7	1.9
28	1.5	2.1	2.9	3.1	3.3	3.5	3.5	3.4	3.4	3.3	3.1	2.6	2.0
29													
30													
31													
MEAN*	1.6	2.3	2.8	3.1	3.3	3.4	3.4	3.4	3.3	3.3	3.1	2.7	2.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

MARCH 1942

TABLE 183

MARCH 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED — 120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.6	3.8	3.9	3.9	3.0	2.6	3.5	4.9	5.7	6.2	6.5	6.7	7.0	7.2	7.5	7.2	7.1	6.5	7.0	8.5	7.3	8.0	6.0	6.2	5.9
2	5.3	4.9	4.3	4.0	2.7	3.3	3.3	5.9	6.0	6.5	6.5	6.9	8.9	10.0	8.2	7.3	6.6	6.4	6.6	7.0	7.0	5.2	3.9	4.1	5.9
3	...a	...f	4.0	3.6	2.5	p2.9f	3.9	5.3	7.5	7.7	8.9	9.6	9.8	9.3	9.1	9.2	8.3	7.9	7.5	7.5	6.6	6.3	5.6	5.0	...
4	4.5	4.1	3.7	3.6	3.3	2.4	3.4	4.6	5.5	6.6	8.4	8.0	8.3	8.7	8.6	8.4	7.9	7.5	7.5	7.6	6.5	5.5	4.9	4.5	6.0
5	4.3	4.1	3.6	3.4	3.3	3.0	3.8	4.9	4.9	4.9	5.5	5.5	5.6	5.9	...c	...c	6.4	6.3	5.7	5.8	5.4	4.5	3.9	3.7	...
6	3.7	3.7	3.3	2.7	2.4	2.6	3.5	p5.1c	5.0	5.3	5.6	p6.0c	6.5	7.1	7.5	6.8	6.0	5.3	5.2	5.4	5.0	4.8	p4.5f	4.1	4.9
7	3.6	3.9	3.4	3.0	...f	...f	3.5	5.1	6.0	6.7	7.5	8.2	8.9	...b	...b	9.0	8.7	8.0	7.5	7.2	6.4	5.8	5.2	5.2	...
8	5.0	4.6	4.3	3.7	3.1	2.9	3.4	4.3	4.7	5.0	5.7	5.9	7.3	8.4	8.5	7.1	6.7	6.7	7.2	6.8	6.3	6.0	6.0	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.6	6.0	7.0	8.5	8.9	9.4	6.2	5.5	5.2	5.5	5.5	5.4	4.5	3.7	2.9	...
10	...f	...f	...f	...f	3.7	3.8	4.4	4.9	5.4	6.0	7.3	7.2	3.3	9.0	8.5	7.6	6.7	6.8	7.1	6.1	5.0	4.6	4.4	4.3	...
11	4.2	4.5	3.5	3.2	3.2	3.0	3.8	5.7	6.7	7.0	7.7	8.5	9.0	9.7	9.4	8.9	7.9	6.9	6.8	6.0	5.4	4.9	4.6	4.4	6.0
12	4.3	4.0	3.8	3.5	3.1	3.0	3.7	5.2	5.8	6.3	7.0	7.0	7.4	8.0	7.5	6.6	6.5	6.7	6.6	7.1	6.1	4.2	4.1	3.9	5.5
13	3.7	3.7	3.7	3.6	3.2	3.2	3.9	5.5	5.6	6.1	6.5	8.0	9.4	9.2	10.4	9.0	8.0	6.9	6.8	6.7	6.4	6.2	5.7	5.6	6.1
14	5.8	5.4	4.1	3.7	3.5	3.4	3.5	5.7	6.4	7.4	7.6	8.0	8.3	8.8	8.8	7.9	8.3	9.4	9.5	6.5	5.7	4.1	4.2	3.7	6.2
15	3.6	3.9	3.9	4.2	2.7	2.4	3.3	4.9	5.5	5.9	6.1	6.6	6.1	6.1	6.5	6.4	6.7	7.3	7.4	6.5	4.1	2.8	3.0	3.1	5.0
16	3.1	3.3	3.4	3.4	3.3	3.3	3.8	5.0	5.5	5.5	6.0	6.7	7.5	8.0	7.4	7.0	7.1	7.4	7.7	7.1	5.0	3.6	3.7	3.8	5.3
17	3.7	3.7	3.8	3.7	3.6	3.1	4.0	5.8	6.8	6.3	7.0	7.5	8.0	9.0	9.1	8.4	9.2	9.1	7.8	6.6	5.5	4.8	4.3	4.0	6.0
18	3.9	3.8	3.7	3.9	3.8	3.7	4.3	6.2	7.1	7.2	p7.6c	8.0	8.7	9.3	10.0	9.8	9.0	9.1	8.6	7.6	6.8	5.5	5.1	5.0	6.6
19	4.9	4.9	4.8	4.7	4.6	4.7	3.8	6.2	6.5	6.6	7.6	8.7	9.3	9.5	9.1	8.9	8.9	8.5	8.3	6.9	5.7	5.3	4.7	4.5	6.6
20	4.6	4.1	4.1	p3.7a	3.3	3.3	3.5	...c	...c	5.9	7.4	8.6	10.0	10.4	9.6	8.9	7.5	7.5	7.1	6.8	6.1	4.6	4.1	4.0	...
21	4.1	3.7	3.7	3.7	3.5	3.5	4.1	5.3	6.1	6.4	6.8	7.8	8.5	9.9	10.5	10.5	10.2	10.1	9.4	8.0	5.6	5.3	4.5	4.5	6.5
22	4.5	3.8	3.8	3.8	3.7	4.0	4.7	6.4	7.0	7.2	7.6	7.7	8.6	9.2	8.9	7.9	7.0	7.5	7.0	6.0	5.8	4.9	4.2	4.3	6.1
23	4.5	4.3	4.0	4.0	3.9	4.0	3.8	5.4	6.0	6.6	7.2	p7.6b	8.0	8.7	8.5	8.8	9.0	8.2	7.7	6.7	6.1	5.1	4.8	4.7	6.1
24	4.3	4.1	3.9	3.9	3.3	2.9	3.7	6.1	7.8	8.1	8.5	9.5	10.0	9.7	10.0	9.9	10.0	10.1	8.6	7.5	6.3	5.8	5.0	5.0	6.8
25	5.3	5.1	5.1	4.8	4.2	4.0	4.6	7.3	9.0	9.8	9.6	9.7	9.6	10.0	10.6	10.7	10.8	10.9	10.5	8.0	5.7	5.4	5.0	4.8	7.5
26	5.0	4.8	4.7	4.3	3.7	3.6	4.5	7.4	8.8	...c	...c	...c	...c	...c	...c	...c	p10.3	10.4	9.7	8.0	6.2	5.8	6.2	5.8	...
27	5.9	6.0	5.4	5.2	4.8	4.9	5.2	6.4	7.0	...c	...c	...c	8.8	9.5	9.4	9.7	8.5	8.2	7.7	6.8	5.2	4.5	4.6	4.6	...
28	4.5	4.1	4.0	4.0	3.8	4.0	4.1	6.2	6.9	7.7	7.6	8.3	9.0	9.5	9.3	10.1	10.4	10.0	9.6	7.5	5.0	4.3	4.3	4.1	6.6
29	4.0	4.2	4.2	4.2	3.8	3.5	4.1	6.1	8.0	8.8	8.8	8.5	9.1	9.1	10.9	10.9	10.4	10.5	9.5	7.7	7.0	5.5	5.1	5.1	7.0
30	4.8	4.8	4.9	4.3	3.5	3.4	3.9	6.7	8.3	9.8	10.3	...c	9.4	10.2	...c	...c	10.7	10.4	9.5	7.1	6.5	5.5	5.0	4.6	...
31	4.6	4.5	4.4	4.5	4.2	4.0	4.4	6.5	7.2	8.6	9.3	9.8	10.8	11.0	9.7	10.2	9.9	10.0	9.2	7.2	5.0	4.9	4.8	...c	...
MEAN*	4.4	4.3	4.0	3.9	3.5	3.4	3.9	5.7	6.5	6.8	7.4	7.8	8.5	8.9	9.0	8.6	8.3	8.1	7.8	7.0	5.9	5.1	4.7	4.5	6.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 184

MARCH 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1942

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	285	300	290	p270a	250	255	260	245	320	330	340	360	330	330	305	300	295	250	260	265	345	280	350	315	297
2	325	295	315	300	300	265	335	260	240	320	250	430	320	260	270	250	225	230	250	240	235	p270a	300	...a	...
3	...a	...a	250	240	275	275	240	240	260	305	290	310	265	300	310	280	275	225	240	220	230	p280a	330	265	...
4	270	290	p280a	275	260	225	245	225	220	350	275	295	320	275	315	270	270	250	250	230	270	p240a	260	p260a	265
5	265	270	255	270	260	275	265	245	310	435	400	390	400	380	p375c	370	315	240	250	230	p235a	240	285	300	302
6	315	280	260	285	280	300	300	p260c	220	420	420	430c	440	390	340	335	300	230	250	260	240	p250a	260	275	306
7	275	230	230	245	260	255	245	225	285	300	285	290	270	...b	...b	275	265	250	250	225	250	250	p260a	265	...
8	260	255	235	235	240	280	275	250	375	490	360	460	340	290	270	280	265	230	245	225	240	240	230	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	340	375	310	355	340	260	275	290	230	255	245	275	230	235	275	...
10	270	240	255	250	270	255	240	235	225	300	270	290	295	275	265	270	250	220	230	215	215	280	260	255	255
11	275	230	220	250	235	260	250	230	260	270	270	280	p270c	265	275	260	255	225	230	225	225	230	250	265	250
12	235	p230a	210	p215a	220	250	245	230	260	290	270	275	285	270	255	290	220	245	265	240	195	230	250	250	247
13	265	285	250	220	220	255	260	230	260	275	310	300	280	305	270	255	260	225	250	235	240	250	270	290	261
14	245	210	230	260	270	250	260	220	260	250	280	250	290	280	265	225	230	240	210	215	190	240	250	275	246
15	300	...a	...a	215	245	p255a	265	240	270	280	330	290	310	345	300	305	295	235	235	210	195	265	280	285	...
16	260	260	260	240	240	265	255	220	280	300	325	330	300	300	290	290	275	240	240	210	200	220	270	265	264
17	260	255	240	230	235	235	250	230	225	225	300	285	320	290	265	295	265	250	220	220	215	230	240	250	251
18	245	245	260	245	230	245	250	220	225	250	p260c	275	270	290	275	275	270	240	230	225	220	215	240	260	248
19	265	...a	...a	...a	230	220	220	230	215	290	325	315	275	285	225	300	260	230	230	210	225	240	250	270	...
20	...a	...a	...a	...a	...a	250	p270c	...c	...c	375	315	330	300	280	280	260	275	250	240	230	225	220	...a	...a	...
21	250	270	265	240	220	240	240	240	280	285	320	310	320	310	310	295	225	240	220	...a	...a	250	275	260	...
22	245	255	280	345	280	250	255	240	225	265	290	340	330	310	295	290	220	235	230	225	230	230	p250a	275	266
23	260	250	250	240	270	240	275	245	265	275	305	p310b	320	300	300	315	230	240	230	215	220	235	250	265	263
24	270	300	280	265	265	270	265	245	240	220	250	300	260	290	270	230	240	240	230	...a	...a	...a	260	275	...
25	270	...a	...a	...a	220	...a	255	215	235	230	245	...a	...a	275	310	235	235	245	230	215	220	260	250	300	...
26	250	240	240	225	220	250	250	230	230	...c	...c	...c	...c	...c	...c	...c	260	240	225	220	200	275	270	300	...
27	275	265	260	235	270	280	260	240	230	...c	...c	...c	300	300	305	270	225	240	230	215	215	270	270	260	...
28	255	240	260	260	250	260	270	240	220	260	270	300	290	290	275	290	260	235	220	205	205	255	255	250	255
29	250	255	240	230	210	235	250	230	230	255	260	280	290	295	280	270	245	235	210	215	235	220	265	270	248
30	265	250	255	215	270	255	280	240	245	260	250	...c	295	265	...c	...c	255	235	215	190	225	230	235	250	...
31	255	260	255	255	220	240	250	230	235	275	270	295	280	265	290	265	220	240	220	205	210	270	255	...c	...
MEAN*	266	258	255	250	249	255	259	236	253	301	304	320	308	298	287	280	257	237	235	223	227	246	264	271	264

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 185

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1942 MARCH 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.2	4.5	4.8	4.9	4.8	4.8	4.8	4.7	4.3	...	...
2	...	...	...	4.3	4.8	4.3	4.8	p4.8a	4.7	4.4	...	...	...
3	...	...	...	4.8	4.8	4.9	p5.0a	5.1	4.8	4.8	4.5	...	...
4	...	...	...	4.5	4.8	4.9	4.9	4.8	4.9	p4.6a	4.3	3.9	...
5	...	...	4.0	4.3	4.4	4.6	4.6	4.6	p4.5c	4.3	4.2	...	...
6	...	...	...	4.2	4.3	p4.4c	4.5	4.5	4.5	4.5	4.2	...	...
7	...	...	4.1	4.6	4.7	4.8	4.7	...b	...b	...b	4.2	...a	...
8	...	...	4.0	4.2	4.3	4.4	4.5	4.5	4.3	4.2	4.0	...	...
9	...	...	...	4.2	4.5	4.6	4.7	4.3	4.2	4.2	4.0	...	...
10	...	...	...	4.4	4.4	4.6	4.5	4.6	4.5	4.3	4.1	...	...
11	...	...	4.1	4.3	4.6	4.7	...c	4.6	4.8	4.5	3.9	...	...
12	...	...	4.0	4.3	4.4	4.5	4.5	4.5	4.4	4.4	...	...	...
13	...	...	4.0	4.2	4.5	4.5	4.6	4.6	4.5	4.3	4.1	...	...
14	...	...	3.9	4.4	4.5	4.5	4.7	4.8	4.5	...	...	...	...
15	...	...	3.9	4.3	4.5	4.5	4.5	4.5	4.4	4.4	4.2	...	...
16	...	...	4.0	4.2	4.5	4.7	4.6	4.8	4.6	4.4	3.9	...	...
17	...	...	...	...	4.8	4.8	4.8	4.7	4.7	4.6	...	...	...
18	...	...	...	4.4	...c	4.8	4.8	5.0	4.8	4.6	4.3	...	...
19	...	...	...	4.5	5.2	4.8	4.8	4.9	4.7	4.8	4.2	...	...
20	...	...	...	4.8	4.8	4.8	4.9	4.8	4.8	4.6	...	...	...
21	...	...	...	4.5	4.9	4.9	4.9	4.8	5.0	4.8	4.6	...	...
22	...	...	...	4.6	5.0	5.2	5.0	5.0	5.0	4.9	...	...	...
23	...	...	4.1	4.5	4.8	p5.1b	5.3	5.0	5.0	4.9	...	...	...
24	...	...	...	...	4.8	4.8	4.9	5.0	4.8	...	...	...	...
25	...	...	...	...	...a	...a	...a	5.0	5.5	...	...	...	...
26	...	...	...	...c	...c	...c	...c	...c	...c	...c	p4.3	...	...
27	...	...	...	...c	...c	...c	5.0	5.1	5.4	4.9	...	...	...
28	...	...	...	4.7	4.8	5.0	5.1	4.8	5.0	4.9	4.2	...	...
29	...	...	...	4.5	4.9	5.2	5.2	5.1	4.9	4.7	...	...	...
30	...	...	4.1	4.2	4.5	...c	5.1	4.9	...	...	4.1	...	...
31	...	...	...	4.5	4.8	5.0	4.9	4.9	5.0	4.6	...	...	...
* MEAN	...	...	4.0	4.4	4.7	4.8	4.8	4.8	4.8	4.6	4.2	3.9	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	220	p220a	220	...a	...a	...a	220	225	240	...	...
2	...	...	...	220	240	220	200	p210a	225	220	...	...	...
3	...	...	...	...a	200	235	p220a	200	195	215	...a	...	...
4	...	...	...	200	195	235	200	200	225	p225a	225	220	...
5	...	...	205	200	190	p190a	195	220	...c	240	210	...	...
6	...	...	...	210	240	...c	...c	240	215	225	220	...	...
7	...	...	220	210	215	210	195	...b	...b	...b	...b	...a	...
8	...	...	215	200	200	195	195	240	210	210	220	...	...
9	...	...	...	220	220	225	p230a	235	240	p230a	220	...	...
10	...	...	...	200	p200a	200	p195a	190	220	210	205	...	...
11	...	...	225	210	200	190	190	210	210	220	220	...	...
12	...	...	215	200	190	200	210	200	210	200	...	...	...
13	...	...	225	210	210	200	...a	...a	...a	220	225	...	...
14	...	...	220	220	200	195	230	245	225	...	...	...	...
15	...	...	200	200	260	230	230	220	235	220	220	...	...
16	...	...	215	200	200	185	195	200	210	225	230	...	...
17	...	...	...	...	200	230	220	p225a	230	230	...	...	...
18	...	...	...	...a	...c	215	205	215	230	250	200	...	...
19	...	...	...	200	200	195	p210a	225	220	215	...	...	...
20	...	...	...	...a	215	210	240	230	235	...a	...	...	...
21	...	...	...	235	210	220	210	200	245	225	220	...	...
22	...	...	...	230	250	p230a	225	225	240	220	...	...	...
23	...	...	225	225	220	...b	220	200	230	215	...	...	...
24	...	...	...	...	200	185	225	230	220	...	...	...	...
25	...	...	...	...a	...a	...a	...a	220	215	...	...	...	...
26	...	...	...	...c	...c	...c	...c	...c	...c	...c	215	...	...
27	...	...	...	...c	...c	...c	195	...c	...c	220	...	...	...
28	...	...	...	210	200	190	200	200	220	220	220	...	...
29	...	...	...	220	220	210	200	210	...c	235	...	...	...
30	...	...	230	210	200	...c	190	240	...c	...c	235	...	...
31	...	...	...	225	215	200	200	225	205	210	...	...	...
* MEAN	...	...	218	212	211	200	209	218	222	222	220	220	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 186

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1942 MARCH 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.8	1.0	1.0	1.1	1.1	1.0	0.9	0.9	0.8	0.7	0.6
2	...	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7
3	...	0.7	0.7	1.0	0.8	1.0	1.0	0.9	0.8	0.8	0.8	0.7	0.7
4	...	...e	0.7	0.7	0.8	0.8	0.8	0.8	1.0	0.9	0.8	0.7	0.6
5	...	...e	0.8	0.8	0.8	1.0	0.9	0.8	...c	0.8	0.8	0.7	0.7
6	...	...e	...c	0.8	1.1	...c	...c	1.0	0.9	0.8	0.8	0.8	0.5
7	...	0.6	0.7	0.7	1.0	1.1	1.0	...b	...b	q4.3b	q2.2b	1.0	0.7
8	...	0.7	0.8	0.8	1.0	1.1	1.0	1.1	1.0	0.8	0.7	0.6	0.6
9	...	...c	...c	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6	0.6
10	...	0.7	0.7	0.7	0.8	1.0	1.0	1.0	0.9	0.8	0.9	0.8	...e
11	...	0.7	0.8	0.8	0.8	1.0	0.9	1.0	0.8	0.8	0.7	0.7	...e
12	...	0.7	0.7	0.7	0.8	0.8	0.9	1.0	0.9	0.8	0.8	0.7	...e
13	...	0.7	0.6	0.8	0.9	0.7	0.8	1.0	0.9	0.9	0.8	0.8	0.7
14	...	0.7	0.7	0.7	0.8	0.9	0.8	1.1	1.0	0.8	0.8	0.7	0.7
15	...	0.7	0.7	0.7	0.7	1.0	0.8	0.8	0.8	0.8	0.8	0.7	0.6
16	...	0.7	0.7	0.7	0.8	1.0	0.8	0.9	0.8	0.8	0.7	0.7	0.5
17	...	0.6	0.6	0.8	0.8	0.8	1.0	1.0	0.9	0.8	...c	...c	...c
18	...	0.7	0.8	0.8	p0.8c	0.8	1.0	...c	...c	...c	0.7	0.8	...e
19	...	0.7	0.8	0.8	0.8	0.9	1.0	0.8	0.9	0.8	0.8	0.7	0.6
20	...	...c	...c	1.0	0.8	0.9	1.0	1.0	0.9	1.0	0.8	0.7	0.7
21	...	0.7	0.7	0.8	1.0	0.9	1.0	1.0	0.9	1.0	0.8	0.8	...e
22	...	0.7	0.8	0.8	0.9	1.0	1.0	0.9	1.0	0.9	1.1	0.7	0.7
23	...	0.7	0.8	1.1	1.0	...b	1.1	1.8	1.0	0.9	0.8	0.8	...e
24	...	0.7	0.7	0.8	0.8	1.0	1.0	1.3	1.0	0.8	0.8	0.9	0.7
25	...	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.7
26	...	0.7	0.7	...c	...c	...c	...c	...c	...c	...c	0.7	0.7	...e
27	...	0.7	p0.7c	...c	...c	...c	1.0	1.1	1.0	1.0	0.8	0.6	...e
28	...	0.7	0.7	0.7	0.8	0.9	1.0	1.1	1.1	1.0	0.9	0.8	...e
29	...	0.8	0.8	1.2	...c	...c	...c	...c	...c	...c	1.2	0.8	...e
30	...	0.8	...c	...c	...c	...c	...c	...c	...c	...c	0.7	0.7	...e
31	...	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	...e
MEAN*	...	0.7	0.8	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.6	2.3	2.8	3.3	3.5	3.6	3.4	3.3	3.3	3.3	3.0	2.8	2.0
2	1.7	2.3	2.7	3.0	p3.1a	3.2	3.3	3.3	3.0	3.2	2.9	2.4	...a
3	...a	2.2	2.8	3.3	3.4	3.4	3.4	3.1	3.3	3.4	p2.9a	2.5	1.9
4	1.4	2.3	2.7	3.0	3.3	3.3	3.1	3.3	3.2	3.2	2.9	2.5	2.1
5	...h	2.3	2.7	3.0	3.1	3.0	3.1	3.5	...c	...a	...a	...a	1.9
6	1.5	p2.0	...c	3.0	3.2	...c	...c	3.5	3.5	2.8	2.4	p2.0a	1.6
7	1.5	2.2	2.6	3.0	3.2	3.3	3.4	...b	...b	...b	3.1	2.9	...a
8	1.5	2.2	2.6	2.9	3.0	3.2	3.3	3.2	3.3	3.2	3.0	2.6	1.8
9	...c	...c	...c	2.9	3.1	3.2	3.2	3.2	3.3	...a	...a	2.3	...a
10	1.5	2.1	2.6	2.9	3.1	3.3	3.2	3.0	3.1	p3.0a	2.9	2.4	1.9
11	1.4	2.1	2.7	3.0	3.1	3.1	3.1	3.0	p3.0a	2.9	2.8	2.4	...a
12	1.3	2.0	2.5	2.8	3.1	3.2	3.2	3.0	3.0	3.2	p2.8a	2.4	...a
13	1.2	2.0	2.6	3.0	3.2	3.3	3.3	3.2	3.2	2.9	2.7	2.5	1.6
14	1.2	2.1	2.6	2.9	3.2	3.3	3.3	3.4	3.3	3.1	2.9	2.3	1.7
15	...a	2.0	2.5	2.9	3.1	3.2	3.3	3.4	3.3	...a	...a	2.4	...a
16	1.3	2.2	2.6	2.9	3.1	3.3	3.4	p3.4a	3.4	3.3	3.0	2.4	...a
17	1.2	2.2	2.7	3.0	3.2	3.4	3.3	3.3	3.3	3.2	2.8	...c	...c
18	1.3	2.3	2.7	3.1	p3.2c	3.4	3.5	p3.4c	3.3	3.2	2.9	2.4	...a
19	1.3	2.2	2.7	3.0	3.2	3.4	3.4	3.4	3.0	2.9	2.5	1.9	...a
20	1.2	...c	...c	3.0	3.3	3.3	3.4	3.4	3.2	3.2	2.8	2.1	1.0
21	1.3	2.2	2.7	3.1	3.3	3.2	3.3	3.4	3.5	3.0	2.9	...a	...a
22	1.3	2.2	2.8	3.1	3.3	3.5	3.6	3.6	3.6	3.4	3.1	2.5	1.6
23	1.4	2.3	2.8	3.2	3.2	...b	3.8	3.7	3.5	3.3	3.0	2.4	...a
24	[illegible]	2.2	2.8	3.1	3.4	3.5	3.5	3.4	3.4	3.5	3.1	2.6	1.1
25	...	2.3	2.8	3.2	3.4	3.4	3.1	3.5	3.5	3.3	3.0	2.4	...a
26	[illegible]	2.2	2.7	...c	...c	...c	...c	...c	...c	...c	[illegible]	2.5	1.5
27	...a	2.1	2.7	...c	...c	...c	3.6	3.3	p3.2c	2.9	2.9	2.4	1.6
28	1.2	2.0	2.7	3.1	3.3	3.2	3.5	3.5	3.5	3.3	[illegible]	2.4	...a
29	1.2	2.1	2.7	3.1	3.3	3.5	3.5	3.7	...c	3.2	2.8	2.4	...
30	...	2.3	2.7	3.0	3.0	...c	3.5	3.6	...c	...c	2.8	2.4	1.5
31	1.2	2.2	2.7	3.0	3.3	3.4	3.6	3.5	3.4	3.2	2.8	2.4	1.4
MEAN*	1.3	2.2	2.7	3.0	3.2	3.3	3.4	3.4	3.3	3.2	2.9	2.4	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 187

APRIL 1942 APRIL 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	...c	8.2	8.0	8.7	9.9	10.3	11.0	11.0	10.3	10.2	8.7	6.4	5.9	5.2	5.5	5.5	...
2	5.5	5.2	5.1	5.1	4.7	4.3	4.5	5.5	6.4	8.0	8.0	8.9	10.1	10.3	10.5	10.6	9.6	8.9	9.0	7.7	6.8	6.6	6.6	6.2	7.2
3	5.9	5.3	4.5	4.0	...c	...c	...c	...c	...c	7.9	8.1	10.0	10.0	9.7	10.0	10.5	10.2	9.9	8.8	5.5	4.4	3.7	3.5	3.8	...
4	4.0	p4.1a	4.2	4.1	3.0	2.7	2.9	4.8	6.0	7.4	6.3	6.2	7.0	7.3	8.3	7.3	8.0	8.9	6.4	6.4	6.2	5.8	5.7	6.4	5.8
5	4.6	4.4	3.7	...c	...c	...c	...c	5.2	...c	8.3	9.4	9.5	10.4	10.4	9.1	9.0	8.3	7.7	6.5	5.3	4.7	4.3	4.2	3.8	...
6	3.5	3.4	3.2	3.4	2.9	2.9	3.0	5.1	6.3	7.2	p7.3c	7.4	8.0	8.0	7.5	7.8	7.3	6.7	5.4	4.5	4.0	3.9	3.8	4.0	5.3
7	4.0	3.5	3.3	3.6	3.1	2.7	3.2	5.2	6.3	7.0	6.5	6.9	7.2	7.3	7.7	7.7	7.8	7.4	6.4	4.5	3.2	3.3	3.1	3.0	5.2
8	3.1	3.3	3.3	3.4	3.2	2.4	2.5	4.9	6.6	8.0	7.4	7.4	8.0	8.9	9.2	9.0	7.5	7.2	7.3	7.2	6.8	6.2	6.1	4.7	6.0
9	4.5	4.3	4.2	4.3	4.2	3.6	3.5	5.6	6.3	7.9	8.0	9.0	9.9	9.2	9.0	8.0	8.0	7.7	6.2	4.0	4.0	4.1	3.9	3.8	6.0
10	4.0	3.7	3.7	3.7	3.3	3.1	2.9	5.2	7.0	...c	...c	...c	8.0	7.9	7.6	8.6	8.4	7.2	5.8	5.0	3.5	3.5	3.6	3.5	...
11	3.5	3.6	3.7	3.5	3.5	2.9	3.1	5.4	6.6	7.7	8.6	9.7	11.0	13.0	12.4	11.7	11.1	8.2	8.7	7.0	6.4	6.5	5.3	5.6	7.0
12	5.3	4.8	5.2	5.5	4.0	3.5	3.3	5.7	7.7	8.8	9.0	7.9	9.6	9.8	10.3	10.1	9.4	7.8	7.1	6.4	6.1	5.8	3.8	3.6	6.7
13	3.5	3.4	3.6	3.8	4.1	3.1	3.1	5.7	7.9	8.2	8.8	9.1	10.4	10.0	10.0	9.9	9.8	9.1	7.7	5.2	3.6	3.9	3.6	3.2	6.3
14	3.3	3.3	3.6	4.0	3.1	2.1	2.6	5.5	8.3	8.9	10.3	10.2	12.4	11.8	10.7	8.9	9.2	8.3	7.3	6.2	6.0	5.3	4.2	4.0	6.6
15	3.8	3.9	4.2	4.3	4.0	3.3	3.1	5.5	7.7	8.1	8.2	9.3	9.4	...c	...c	...c	...c	p8.0	7.0	4.5	3.6	3.8	3.8	4.0	...
16	4.1	4.1	4.1	4.1	4.0	4.0	3.7	5.8	6.7	...c	...c	...c	...c	...c	...c	...c	...c	8.6	8.0	6.0	4.5	4.2	4.0	3.9	...
17	3.9	3.7	3.7	p3.8f	3.8	3.5	4.0	5.7	8.0	8.2	9.0	9.2	10.6	11.2	10.4	9.5	8.0	8.0	7.8	6.1	5.5	4.0	4.3	p4.0f	6.5
18	3.1	...f	...f	4.3	3.6	2.7	2.9	5.1	7.0	8.4	9.1	10.2	10.0	10.4	9.9	8.4	10.0	8.9	7.7	5.8	5.3	4.6	4.4	4.3	...
19	4.6	4.6	4.3	4.3	3.2	2.9	3.2	7.1	8.0	p9.0c	9.7	9.7	8.8	10.3	10.6	9.9	10.1	9.2	7.4	5.8	5.4	4.9	4.9	4.7	6.5
20	4.6	4.5	4.2	4.4	4.2	4.3	4.2	6.1	7.4	8.3	8.8	9.8	10.4	11.4	12.0	11.5	10.5	9.5	7.4	6.0	5.4	5.0	4.7	4.3	7.0
21	4.2	4.6	4.4	4.3	3.8	4.2	p5.1f	6.0	7.5	8.5	8.5	9.1	9.4	10.2	10.3	10.1	9.8	9.3	7.5	5.5	4.5	4.5	3.9	p4.0f	6.6
22	4.0	4.0	3.7	3.8	3.7	3.8	4.3	6.2	7.8	7.7	9.5	9.8	8.4	9.4	10.1	10.9	10.1	9.5	8.0	5.6	4.7	4.9	4.5	4.3	6.6
23	4.1	3.8	3.8	4.0	4.2	3.5	3.2	6.2	7.6	p8.0c	8.4	9.0	9.0	9.1	9.6	10.3	10.0	9.3	7.5	6.2	6.0	5.7	5.4	6.0	6.7
24	5.6	4.7	4.5	4.1	4.1	4.0	4.1	6.6	8.2	9.0	11.0	10.5	10.5	11.2	10.4	10.3	9.7	9.1	7.8	7.0	6.5	4.8	4.4	4.1	7.2
25	4.1	4.1	3.8	3.9	3.9	3.5	3.5	6.1	7.9	9.3	10.2	10.8	10.4	10.5	10.2	9.6	9.5	8.1	6.6	5.4	5.0	4.5	3.8	3.6	6.6
26	3.4	3.4	3.4	3.6	3.5	3.3	3.3	5.8	7.4	8.0	9.5	9.8	9.0	8.8	9.3	10.2	10.0	9.5	7.9	5.2	p4.7c	4.0	3.5	3.2	6.2
27	3.4	3.4	3.3	3.3	3.1	3.1	3.0	5.9	7.0	8.0	9.6	8.9	8.6	8.1	9.8	9.8	10.0	9.8	7.2	5.0	5.3	4.6	4.2	3.8	6.2
28	3.8	3.8	4.0	4.3	4.3	4.2	4.0	6.3	7.1	8.0	8.4	10.4	12.4	12.4	12.2	10.9	9.0	8.6	7.3	5.4	5.0	4.5	3.9	3.6	6.8
29	4.0	3.6	3.8	4.1	3.9	3.0	3.0	5.9	7.6	9.2	9.7	10.0	9.3	9.4	9.6	10.4	10.1	9.5	7.5	5.0	4.0	3.7	3.4	3.4	6.4
30	3.5	3.8	3.8	3.8	3.8	3.3	3.1	6.0	p7.2c	9.5	9.4	10.1	8.8	10.0	9.6	10.0	9.7	9.0	7.5	4.9	4.5	4.1	4.0	3.8	6.4
31																									
MEAN*	4.1	4.0	3.9	4.0	3.7	3.3	3.4	5.7	7.2	8.2	8.7	9.2	9.6	9.9	9.9	9.7	9.3	8.6	7.4	5.7	5.0	4.7	4.3	4.2	6.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 188

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	...c	265	270	250	295	275	265	260	225	240	215	205	230	270	280	255	...
2	250	250	240	230	220	225	235	220	230	270	270	280	275	280	280	280	225	240	225	215	260	270	290	275	251
3	280	240	245	235	...c	...c	...c	...c	...c	270	255	265	260	280	275	255	260	225	210	200	235	280	280	285	...
4	...a	...a	...a	230	...a	250	275	245	310	255	...a	300	305	285	270	285	290	245	...a	250	250	230	...a	215	...
5	260	240	280	...c	...c	...c	...c	240	...c	250	260	270	265	240	265	250	240	225	210	220	225	240	245	260	...
6	250	280	240	245	230	240	235	235	250	265	p265c	265	280	275	280	265	240	225	215	235	240	240	270	260	251
7	235	225	315	240	240	240	240	225	235	245	260	270	265	280	260	260	260	230	205	200	230	245	235	...a	...
8	225	250	240	225	205	255	255	220	250	245	255	270	295	275	285	255	245	235	225	255	240	270	230	245	248
9	270	270	290	275	235	250	235	220	245	250	265	270	260	250	255	255	240	230	210	220	250	235	245	270	250
10	265	240	230	215	210	260	245	230	250	...c	...c	...c	255	250	260	250	240	220	225	230	260	265	255	255	...
11	260	245	230	225	220	210	230	215	235	260	260	285	300	260	255	245	240	230	225	220	255	230	200	250	241
12	240	260	260	p230a	200	p210a	220	240	240	250	245	250	270	270	265	250	240	230	225	230	245	230	250	235	241
13	275	225	p220a	220	240	245	255	215	245	255	255	260	240	270	270	250	250	225	220	230	250	270	255	255	246
14	295	300	270	215	200	210	310	240	225	270	265	300	265	250	250	250	240	225	215	245	230	220	230	280	250
15	265	290	280	270	260	270	260	235	245	245	255	250	270	...c	...c	...c	...c	p220c	205	200	230	255	265	265	...
16	250	260	235	235	210	250	200	220	220	...c	...c	...c	...c	...c	...c	...c	...c	275	280	295	325	330	330	350	...
17	275	260	300	250	220	220	230	250	235	270	275	350	285	285	265	250	230	230	240	205	220	p235a	250	p260a	254
18	270	270	p260a	250	p240a	235	245	240	260	260	265	265	260	270	250	270	235	220	210	225	240	270	270	270	252
19	280	255	235	225	220	275	240	235	230	p240c	250	260	265	275	270	250	265	215	210	220	235	225	240	245	244
20	275	270	265	280	260	280	245	225	230	235	270	260	265	260	250	240	230	215	220	240	255	240	270	275	252
21	320	250	295	270	290	275	p250a	220	235	235	225	240	260	270	260	240	235	230	210	210	230	230	...a	...a	...
22	...a	240	245	250	240	235	220	215	205	235	255	260	235	270	265	250	240	225	210	225	260	250	235	280	...
23	280	275	265	250	230	210	230	220	230	240	255	265	245	255	280	255	240	220	225	255	290	255	320	260	252
24	215	260	285	295	330	280	270	235	240	260	245	270	250	280	225	230	235	230	210	225	220	220	...a	250	...
25	...a	240	250	260	230	245	230	220	235	250	265	260	255	275	260	260	240	210	200	230	230	220	240	250	...
26	260	280	290	270	235	235	240	230	225	230	255	250	255	290	260	260	p240c	220	205	280	p260c	235	235	260	250
27	250	235	235	230	220	235	230	220	235	250	250	270	250	250	265	260	250	220	200	245	230	235	235	225	239
28	260	245	290	260	260	270	230	225	225	250	310	280	255	260	240	235	230	230	215	230	230	230	230	240	247
29	255	245	210	245	210	225	245	225	230	240	250	230	235	260	230	250	235	210	220	215	240	230	235	240	234
30	250	255	...a	250	230	220	225	230	230	250	245	250	275	295	250	245	235	215	200	p220a	245	265	265	270	...
31																									
MEAN*	262	256	259	246	234	243	242	228	238	251	259	268	265	269	261	254	242	227	217	229	245	247	246	260	248

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 189

APRIL 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.4	4.5	4.4	4.9	4.8	4.5	4.5	...	...	...
2	...	...	...	4.8	4.5	4.6	4.8	4.7	4.8	4.6	...	...	...
3	...	...	...	4.2	4.3	4.2	4.7	4.7	4.1	4.1	4.3	...	...
4	...	...	4.0	3.9	...a	4.4	4.7	4.5	4.4	4.4	...a	...	...
5	...	...	...	4.3	4.5	4.8	4.5	4.4	4.3	4.2	3.8	2.8	...
6	...	2.7	3.8	4.3	p4.4c	4.6	4.5	4.5	4.5	4.2	3.7	...	...
7	...	...	3.7	4.0	4.4	4.5	4.5	4.6	4.4	4.2	4.0	...	...
8	...	...	4.0	4.2	4.4	4.4	4.6	4.2	4.8	4.2	4.0	...	...
9	...	...	...	4.2	4.5	4.5	4.6	4.4	4.4	4.0	...	...	...
10	...	...	...	...c	...c	...c	4.5	4.4	4.3	4.3	3.8	...	...
11	...	...	4.0	4.2	4.3	4.8	4.5	4.7	4.5	4.2	...	...	...
12	...	...	...	4.3	4.5	4.6	4.6	4.8	4.8	4.3	3.6	...	...
13	...	...	4.0	...a	...a	4.8	4.7	5.0	...a	4.4	...a	...	...
14	...	...	4.0	4.8	4.9	4.9	4.7	p4.6a	4.5	4.2	...a	...	...
15	...	...	3.8	4.3	4.5	4.6	4.8	...c	...c	...c	...c	...	...
16	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
17	...	...	...	4.4	4.7	4.6	4.8	4.8	...a	...a	...	...	...
18	...	...	...	4.4	4.7	4.6	4.6	4.9	4.5	4.7	...	...	...
19	...	...	...	...	4.9	5.2	5.4	5.5	5.1	4.6	4.0	...	...
20	...	...	...	4.4	5.0	5.0	5.0	5.5	4.8	4.5	3.8	...	...
21	...	...	3.7	4.3	4.5	4.5	4.6	4.7	4.7	...	...	...	...
22	...	...	...	4.3	4.9	4.9	4.8	4.9	5.2	4.5	3.7	...	...
23	...	...	...	...	5.0	5.0	4.7	4.8	5.1	4.8	3.8	...	...
24	...	...	4.0	4.6	4.2	4.9	4.8	5.4	...	...	...	...	...
25	...	...	...	...	4.5	5.0	4.9	5.2	4.6	4.4	3.8	...	...
26	...	...	...	4.3	4.6	4.7	4.7	5.2	4.6	4.0	...c	...	...
27	...	...	...	...	4.7	5.2	4.5	4.4	4.6	4.2	3.8	...	...
28	...	...	...	4.3	5.0	4.8	4.6	4.9	4.6	4.0	3.3	...	...
29	...	...	...	3.1	...	...	...	4.2	...	4.3	...	...	...
30	...	...	...	4.3	4.4	4.4	p4.3	4.9	4.8	3.8	...	...	...
31													
MEAN*	...	2.7	3.9	4.3	4.6	4.7	4.7	4.8	4.6	4.3	3.8	2.8	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	225	...a	210	220	230	235	230	...	...	...
2	...	...	...	215	200	180	200	210	220	230	...	...	...
3	...	...	...	200	185	...a	225	200	...a	220	200	...	...
4	...	...	220	...a	...a	200	...a	215	210	...a	...a	...	...
5	...	...	...	230	220	210	220	195	205	220	220	225	...
6	...	225	215	210	p225c	235	...a	210	220	220	215	...	...
7	...	...	220	220	200	195	200	205	205	220	225	...	...
8	...	...	235	225	210	200	195	195	220	220	230	...	...
9	...	...	...	240	220	205	190	195	225	225	...	...	...
10	...	...	...	...c	...c	...c	210	210	210	225	215	...	...
11	...	...	235	220	200	215	200	210	235	220	...	...	...
12	...	...	...	235	230	210	200	215	225	230	230	...	...
13	...	...	240	...a	...a	...a	235	...a	...a	...a	...	...	...
14	...	...	225	220	230	205	...a	...a	230	230	...a	...	...
15	...	...	235	220	210	200	200	...c	...c	...c	...c	...	...
16	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
17	...	...	...	215	225	225	...a	220	...a	...a	...	...	...
18	...	...	...	240	235	225	200	215	220	230	...	...	...
19	...	...	...	...	195	195	220	220	220	220	240	...	...
20	...	...	...	215	220	205	200	230	225	220	...	...	...
21	...	...	220	230	210	...a	...a	205	225	...	...	...	...
22	...	...	...	215	235	225	215	220	235	250	230	...	...
23	...	...	...	...	220	230	200	225	235	240	240	...	...
24	...	...	230	235	205	210	205	250	...	...	...	...	...
25	...	...	...	...	230	235	210	225	210	220	235	...	...
26	...	...	...	225	220	215	200	245	225	220	...c	...	...
27	...	...	...	...	240	230	200	190	230	235	245	...	...
28	...	...	...	235	240	240	210	250	240	220	225	...	...
29	...	...	...	205	...	...	...	...	...	230	...	...	...
30	...	...	...	230	215	215	p200	220	225	225	...	...	...
31													
MEAN*	...	225	228	223	218	213	207	216	223	226	227	225	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 190

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1942 APRIL 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	...	...	...c	...c	2.9	3.2	3.4	3.3	3.2	3.4	3.2	2.8	2.2	...
2	...	0.7	0.7	0.7	0.8	0.8	0.9	1.0	0.9	0.9	0.7	0.7	...	...	2.0	2.5	3.0	3.2	3.3	3.4	3.3	3.2	3.1	2.8	2.3	...
3	...	...c	...c	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7	...	...	...c	...c	2.8	3.0	3.3	3.3	3.2	p3.0a	2.8	2.6	2.3	...
4	...	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.7	...	...	1.9	2.4	2.8	3.0	3.1	2.8	3.1	3.1	3.0	2.5	...a	...
5	...	0.6	p0.7c	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7	...	...	2.0	p2.3c	2.7	2.9	3.0	3.0	3.2	3.1	2.8	2.6	2.1	...
6	...	0.8	p0.8c	0.8	p0.9c	0.9	0.9	0.9	0.8	0.8	0.7	0.7	...	...	1.9	2.4	2.7	p2.8c	3.0	2.8	3.3	3.1	2.9	2.6	2.2	...
7	...	0.7	0.7	0.8	0.8	0.8	0.8	1.0	0.9	0.8	0.8	0.7	...	...	2.0	2.4	2.7	2.9	3.2	p2.8	3.3	3.1	3.0	2.6	2.1	...
8	...	0.7	0.7	0.8	0.8	[illegible]	0.9	0.8	0.9	0.8	0.7	0.7	...	...	2.0	2.5	3.0	3.0	3.2	3.2	3.1	3.2	2.9	2.7	2.1	...
9	...	0.8	1.0	0.7	0.7	0.8	0.8	0.8	1.0	0.9	0.8	...e	...	...	2.0	2.5	2.8	3.0	3.2	3.1	3.1	3.2	3.0	2.7	...	...
10	...	0.8	0.9	...c	...c	...c	1.1	1.0	1.0	0.9	0.7	...e	...	...	1.9	2.5	...c	...c	...c	3.3	3.3	3.2	2.9	2.6	...	...
11	...	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.7	0.7	...	...	2.0	2.6	3.0	3.1	3.2	3.0	3.1	3.1	3.0	2.4	2.0	...
12	...	0.7	0.7	0.8	0.9	0.9	0.9	1.1	0.9	0.8	0.8	...e	...	...	2.0	2.6	2.9	3.1	3.3	3.3	3.3	3.1	3.0	2.6	...	...
13	...	0.7	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	...	...	2.0	2.7	3.0	3.2	3.4	3.5	3.5	3.2	3.0	2.6	1.8	...
14	...	0.8	0.8	0.9	0.9	1.1	1.0	1.0	0.9	0.8	0.7	...e	...	...	2.2	2.6	3.0	3.2	3.5	3.5	3.3	3.2	3.0	2.5	...	...
15	...	0.7	0.7	0.7	1.8	1.0	0.9	...c	...c	...c	...c	...e	...	...	2.0	2.5	2.9	3.2	3.4	3.5	...c	...c	...c	...c	...a	...
16	...	0.7	0.7	...c	...c	...c	...c	...c	...c	...c	...c	0.6	...	...	2.0	2.6	...c	...c	...c	...c	...c	...c	...c	...c	2.1	...
17	...	0.7	0.8	0.7	0.8	0.9	0.8	0.9	0.9	0.7	0.7	0.7	...	...	2.0	2.5	2.8	3.0	3.2	3.4	3.5	3.4	3.1	2.7	1.9	...
18	...	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.6	...	...	2.0	2.5	2.9	3.2	3.3	3.3	3.3	3.3	3.1	2.7	2.1	...
19	...	...e	0.5	p0.8c	0.9	0.8	1.0	1.0	0.9	0.8	0.7	0.6	...	...	1.8	2.5	p3.0c	3.3	3.4	3.5	3.4	3.3	3.0	2.5	2.0	...
20	...	0.7	1.0	0.8	0.9	1.1	1.1	1.0	1.0	0.9	0.8	0.6	...	...	2.2	2.6	3.1	3.1	3.4	p3.3c	3.1	3.3	3.3	2.6	...a	...
21	...	0.5	0.9	0.7	0.8	0.8	0.9	0.8	1.0	0.6	0.7	0.6	...	...	2.0	2.6	3.0	3.1	3.3	p3.4a	3.5	3.4	3.2	2.8	...a	...
22	...	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...	...	2.0	2.6	2.8	3.2	3.3	3.4	3.3	3.4	3.2	2.8	2.0	...
23	...	0.8	0.8	p0.8c	0.8	0.8	1.0	1.1	1.0	1.0	1.1	...e	...	...	2.2	2.8	p3.0c	3.3	3.5	3.5	3.5	3.3	3.2	2.7	...	...
24	...	0.8	0.9	0.8	0.9	1.0	1.0	0.9	0.8	0.6	0.8	...e	...	...	2.0	2.7	3.0	3.2	3.4	3.3	3.1	3.3	3.0	2.7	2.0	...
25	...	...e	0.7	p0.6	0.7	0.8	0.8	1.0	0.9	0.9	0.7	0.7	...	...	2.1	2.7	p3.0	3.3	3.3	3.4	3.5	3.3	3.1	2.6	2.0	...
26	...	...e	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	...	...	2.0	2.6	2.9	3.1	3.3	3.3	3.2	3.3	3.1	2.8	2.0	...
27	...	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.6	...e	...	...	2.0	2.6	3.0	3.1	3.3	3.3	3.3	3.2	3.0	2.6	1.9	...
28	...	0.7	0.8	0.8	0.7	0.8	1.0	1.0	0.9	0.8	0.8	0.7	...	...	1.9	2.6	3.0	3.2	3.1	3.3	3.4	3.3	3.0	2.6	2.3	...
29	...	0.6	0.6	0.7	0.8	0.8	0.6	0.9	0.9	0.7	0.7	0.6	...	...	2.0	2.7	2.9	3.1	3.0	3.1	3.4	3.2	3.0	2.6	1.9	...
30	...	0.7	0.6	0.6	0.8	0.6	0.8	0.9	0.8	0.6	0.7	0.6	...	...	2.1	2.7	2.9	3.2	3.3	3.3	3.2	3.3	3.0	2.6	1.9	...
31																										
MEAN*	...	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.6	...	...	2.0	2.6	2.9	3.1	3.3	3.3	3.3	3.2	3.0	2.6	2.1	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 191

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — MAY 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.2	4.0	4.2	3.3	3.2	3.2	2.9	5.9	7.8	8.5	9.1	10.0	9.7	10.2	11.1	11.0	10.8	10.0	7.7	5.4	p4.2c	3.0	3.0	3.3	6.5
2	3.6	3.8	3.6	3.4	3.6	2.6	2.5	5.5	8.0	9.0	9.7	9.9	8.5	8.2	9.6	9.6	9.8	8.6	7.6	5.1	3.6	3.0	2.8	3.2	6.0
3	3.1	3.6	3.6	4.3	4.1	3.2	2.5	5.8	6.8	7.2	9.3	9.7	9.9	10.2	9.6	9.4	8.6	8.6	7.1	5.6	3.6	3.3	3.0	2.9	6.0
4	3.3	3.6	3.7	3.9	4.2	3.3	2.6	5.0	6.5	7.7	9.5	9.5	p8.1	p7.6	8.9	9.6	9.6	9.8	7.2	4.6	3.8	3.3	3.0	2.8	5.9
5	3.0	p3.3a	4.0	p4.4f	4.8	4.0	2.3	5.2	6.7	6.5	6.0	5.3	5.7	6.1	...c	...c	...c	5.3	4.0	3.1	2.5	...f	4.0	...a	...
6	...a	1.8	1.8	1.8	p1.7f	1.7	1.8	4.2	5.2	6.0	5.9	p6.5	6.5	6.5	6.4	7.2	6.6	5.8	4.6	3.5	2.7	2.5	2.5	2.5	...
7	2.5	2.5	2.6	2.7	2.7	2.0	...f	4.3	5.8	...c	...c	8.1	8.1	7.9	7.3	8.7	6.8	6.6	5.9	3.4	2.6	2.8	2.8	2.9	...
8	3.0	3.1	3.0	3.0	3.1	2.6	2.5	5.2	6.1	7.2	7.1	8.0	7.0	7.2	7.6	8.3	8.3	6.3	4.9	3.1	3.3	3.4	3.3	3.2	5.0
9	3.3	3.4	3.3	3.3	3.5	3.6	3.5	5.1	6.5	7.0	8.5	9.2	7.4	6.8	7.2	8.3	7.5	6.0	5.1	3.4	3.2	3.6	3.8	3.8	5.3
10	4.0	3.9	3.5	3.5	3.6	3.5	3.1	5.0	6.7	7.5	7.6	8.1	7.9	6.8	7.8	8.6	7.4	6.3	5.3	4.0	3.2	2.8	2.8	2.8	5.2
11	3.3	3.5	3.4	3.5	3.6	3.2	2.9	5.2	7.0	6.7	8.1	8.6	8.4	8.5	8.6	9.0	8.0	6.6	5.7	4.5	3.6	3.1	3.1	2.9	5.5
12	3.2	3.5	3.6	3.1	3.3	3.4	3.2	5.2	6.1	6.8	8.4	9.2	8.1	8.7	7.4	7.9	7.2	6.7	5.0	4.0	3.2	3.0	3.0	2.9	5.2
13	3.2	3.2	3.4	3.4	3.5	3.1	2.9	4.6	6.3	7.6	8.3	9.9	8.8	8.5	8.7	10.0	8.7	6.9	4.5	3.2	2.7	3.1	3.0	2.9	5.4
14	3.1	3.2	3.4	3.2	3.4	2.9	2.6	4.7	6.0	...c	...c	...c	8.0	7.5	8.9	8.2	8.0	8.4	6.1	6.3	2.9	3.0	3.0	3.0	...
15	3.3	3.7	3.9	4.6	4.6	2.7	2.4	4.6	6.6	7.9	8.7	10.0	8.6	7.9	9.2	8.5	8.4	7.5	5.5	4.0	3.5	3.6	3.3	3.7	5.7
16	3.8	3.5	3.6	3.3	3.0	2.8	2.9	5.2	6.9	7.4	9.0	9.2	8.2	7.3	8.1	8.6	7.8	6.6	4.4	3.9	3.5	3.6	3.7	3.6	5.4
17	3.8	3.8	3.9	3.7	3.7	3.2	3.0	5.3	7.0	7.3	9.6	8.6	7.9	9.0	8.1	9.2	8.8	7.0	5.5	2.7	3.1	3.4	3.1	3.1	5.6
18	3.3	3.6	3.6	3.9	4.1	3.6	3.1	5.1	6.2	7.7	8.4	8.2	8.6	8.6	8.5	9.1	8.1	7.4	5.3	3.9	3.6	3.3	3.2	3.5	5.6
19	3.6	3.9	4.0	4.2	4.6	3.5	3.2	5.2	6.0	7.3	7.3	8.0	7.5	8.7	8.2	8.2	7.8	6.9	5.5	4.2	3.7	3.5	3.8	3.8	5.5
20	3.9	4.3	4.8	4.5	4.6	4.1	3.6	5.2	6.3	7.2	8.4	8.0	8.1	7.1	7.1	7.7	8.0	6.1	5.3	3.6	3.7	3.6	3.2	3.7	5.5
21	3.9	4.5	4.7	4.6	5.0	4.5	3.1	4.7	6.3	7.3	8.8	8.6	8.8	7.3	8.6	8.6	8.3	6.4	4.7	4.1	3.4	3.5	3.9	3.3	5.7
22	3.8	4.2	4.0	4.2	4.4	3.8	3.2	4.4	6.2	7.0	7.5	8.2	7.8	8.2	8.0	7.2	6.9	7.0	5.5	4.1	3.6	2.6	3.1	3.5	5.4
23	3.6	3.5	3.9	3.9	3.7	3.6	3.0	4.4	6.0	7.1	8.5	8.6	8.8	8.7	8.2	9.2	8.2	6.6	4.9	4.1	3.0	2.5	2.8	3.3	5.4
24	2.8	3.0	3.3	3.2	3.4	3.5	3.2	4.3	6.3	7.2	7.3	8.5	7.6	8.0	8.3	8.5	7.7	6.3	5.0	3.3	3.6	3.7	3.8	4.3	5.2
25	4.7	4.8	4.9	4.8	5.0	4.0	3.0	4.8	6.0	7.0	7.3	7.9	7.6	7.8	6.8	7.0	7.3	6.3	5.0	3.2	3.4	3.0	2.7	3.0	5.3
26	3.0	3.1	3.3	3.4	4.1	3.7	2.5	4.3	5.7	5.9	6.1	6.6	6.5	6.5	6.2	6.7	6.8	6.3	4.3	2.6	2.8	3.0	3.4	3.0	4.6
27	3.3	3.3	3.3	3.6	4.0	3.7	2.6	4.0	5.4	6.7	7.2	7.0	6.7	6.5	6.0	7.0	7.5	5.6	3.6	2.5	2.9	3.6	3.5	4.0	4.7
28	4.1	3.9	4.0	3.8	3.6	3.6	3.7	4.0	5.8	6.3	7.5	7.2	7.6	8.7	7.8	8.8	8.7	7.0	4.8	2.7	3.3	3.3	3.7	3.8	5.3
29	4.0	4.4	4.3	4.8	4.8	4.3	3.7	4.3	6.2	6.9	7.3	7.5	8.0	6.9	7.4	9.1	7.4	5.5	4.0	2.9	3.1	3.0	2.9	2.9	5.2
30	3.0	3.4	4.0	4.0	4.2	4.6	3.5	4.8	5.6	6.0	6.4	6.8	6.8	6.1	6.2	6.5	6.8	6.2	4.4	3.0	3.6	3.3	3.3	4.0	4.8
31	3.8	4.2	4.3	4.5	4.6	5.0	3.8	4.2	5.8	5.9	6.0	7.0	5.6	7.0	5.8	6.7	7.0	5.6	3.6	2.9	3.0	3.5	3.0	3.2	4.8
MEAN*	3.5	3.6	3.7	3.7	3.9	3.4	3.0	4.8	6.3	7.1	7.9	8.3	7.8	7.8	7.9	8.4	8.0	6.8	5.2	3.8	3.3	3.2	3.2	3.3	5.3

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 192

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MAY 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	p255a	240	210	250	245	250	230	240	240	275	240	250	270	270	260	240	215	200	190	...c	...a	...a	275	...
2	270	250	240	235	220	...a	...a	230	230	255	230	260	240	270	255	255	225	220	210	210	225	230	245	270	...
3	275	p270a	265	250	215	205	p220a	230	215	235	240	260	250	260	245	245	225	235	215	200	210	235	210	255	236
4	255	250	245	245	225	205	210	220	230	245	250	240	p225	p315	275	255	235	215	195	195	225	210	210	...a	...
5	...a	...a	...a	...a	230	185	250	210	240	305	335	450	...c	360	...c	...c	...c	235	215	240	250	265	...a	...a	...
6	...a	...a	290	290	270	255	255	235	235	285	275	p295c	285	265	285	255	225	230	225	230	235	245	255	255	...
7	245	275	260	...a	...a	...a	...a	225	225	...c	...c	260	265	275	250	250	230	210	185	205	260	240	240	265	...
8	265	245	230	225	220	225	250	220	215	240	240	250	260	270	270	255	230	200	200	230	250	250	250	240	239
9	235	235	230	240	240	225	220	215	220	240	245	240	240	255	255	255	215	220	220	215	240	240	235	265	235
10	250	225	225	235	230	225	245	235	235	265	255	255	250	300	270	240	230	215	205	225	225	255	245	245	241
11	250	270	240	240	230	215	230	215	225	235	255	255	250	265	250	250	220	220	200	215	230	230	230	230	235
12	260	240	230	210	225	220	215	215	210	225	260	250	260	260	255	245	225	215	210	235	235	235	245	205	233
13	...a	235	245	240	220	210	225	215	225	235	275	265	255	265	285	240	235	215	200	220	245	235	245	270	...
14	250	245	230	230	230	210	210	230	230	...c	...c	...c	285	275	265	250	260	225	225	210	220	260	200	280	...
15	275	265	270	230	200	215	280	225	235	245	240	270	235	240	270	255	240	225	200	220	210	240	250	260	241
16	230	230	230	220	220	250	250	220	230	240	240	265	255	250	260	260	230	215	210	220	240	245	235	240	237
17	240	230	210	245	215	220	210	210	235	225	260	240	260	290	245	260	230	210	210	200	255	235	220	230	233
18	250	250	245	250	240	200	230	225	220	265	255	275	280	275	245	250	235	210	220	210	215	235	215	240	239
19	255	265	255	255	230	195	225	220	210	240	255	270	265	275	250	250	230	230	215	220	210	240	240	230	239
20	255	245	235	220	230	200	235	220	225	250	255	245	260	250	265	270	235	210	215	215	230	220	245	270	238
21	250	255	255	260	240	210	195	215	210	230	270	260	265	255	270	250	235	215	200	215	215	245	220	215	235
22	250	230	220	235	210	210	230	235	230	250	240	260	265	245	250	245	235	225	200	215	215	230	270	240	235
23	255	280	260	240	245	245	290	235	220	220	270	270	260	255	230	250	235	220	195	215	200	250	245	225	242
24	260	255	235	245	245	215	210	225	215	250	245	255	260	255	275	245	225	205	200	210	205	235	230	260	236
25	240	230	210	210	210	210	210	220	210	230	235	250	260	255	260	255	230	210	220	200	205	215	230	250	227
26	235	245	235	250	220	195	230	220	220	220	260	250	260	265	300	240	220	200	200	230	220	240	220	220	233
27	225	230	240	240	230	190	210	215	225	245	240	245	230	270	255	260	230	200	195	270	285	250	250	275	238
28	235	230	230	220	260	225	220	200	230	230	250	265	240	270	260	270	235	210	210	200	230	230	255	280	237
29	265	260	250	230	225	215	210	220	235	250	...a	290	240	295	280	235	225	200	220	190	220	230	240	245	...
30	240	250	225	240	240	210	195	210	230	235	270	255	270	270	260	270	230	210	220	235	225	200	220	230	235
31	215	230	240	245	235	200	195	215	230	240	250	255	270	245	255	230	255	205	210	230	240	225	230	240	233
MEAN*	250	247	240	237	230	215	228	221	225	244	256	265	256	270	262	252	232	215	208	217	229	236	235	248	238

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 193

MAY 1942 — IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY — MAY 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.4	4.7	4.6	4.5	4.6	4.2	...	...	...
2	...	...	...	4.5	4.4	4.8	4.3	4.5	4.4	4.3	...	...	...
3	...	...	...	...	4.4	4.4	...	4.2	...	...	...	...	...
4	...	...	...	4.0	4.5	4.5	4.3	5.0	p4.6h	4.2	3.5	...	...
5	...	...	...	4.1	4.1	4.3	...	4.3	...	...	...	...	...
6	...	...	...	4.2	4.3	4.3	4.2	4.3	4.3	3.9	...	...	...
7	...	...	...	...	...	4.4	4.3	4.3	4.1	3.7	3.2	...	...
8	...	...	...	3.9	4.2	4.3	4.3	4.3	4.3	4.1	...	...	...
9	...	...	...	3.4	4.3	4.4	4.4	4.3	4.2	4.0	...	...	...
10	...	...	...	4.3	4.3	4.5	4.5	4.8	4.1	4.0	...	...	...
11	...	...	...	4.0	4.3	4.6	4.7	4.7	4.3	4.0	...	...	...
12	...	...	...	...	4.8	4.7	4.6	4.5	4.3	...	...	...	...
13	...	...	...	3.9	4.6	4.4	4.5	4.5	4.6	3.4	3.4	...	...
14	...	...	...	...c	...c	...c	5.0	4.6	4.5	4.2	3.9	...	...
15	...	...	...	4.2	4.3	4.8	4.3	4.5	4.2	4.0	3.3	...	...
16	...	...	...	4.0	4.3	4.5	4.3	4.5	4.1	4.1	3.4	...	...
17	...	...	...	...	4.1	4.5	4.5	5.0	4.0	3.9	3.4	...	...
18	...	...	...	4.2	4.2	4.4	4.8	4.3	4.4	4.0	...	...	...
19	...	...	...	4.2	4.2	4.7	5.0	4.4	4.3	4.1	...	...	...
20	...	...	...	4.3	4.5	4.4	4.6	4.5	4.5	4.6	...	...	...
21	...	...	...	...	4.5	4.5	4.6	4.4	4.4	3.8	...	...	...
22	...	...	...	4.2	4.3	4.6	4.5	4.4	4.2	4.0	...	...	...
23	...	...	...	...	4.4	4.5	4.4	4.3	4.3	...	...	...	...
24	...	...	...	...	4.1	4.2	4.3	4.3	4.3	4.0	...	...	...
25	...	...	...	...	4.2	4.3	4.3	3.9	4.3	...a	...	...	...
26	...	...	...	...	4.1	4.1	4.3	4.2	4.3	3.8	...	...	...
27	...	...	3.0	4.0	4.1	4.3	4.3	4.4	4.3	4.0	...	...	...
28	...	...	...	...	...	4.3	...	4.3	4.1	4.0	3.3	...	...
29	...	...	...	3.9	...	4.5	4.2	4.1	4.3	3.9	...	...	...
30	...	...	3.0	3.1	3.9	4.1	4.5	4.4	4.1	3.7	...	...	...
31	...	...	...	...	3.8	4.1	4.3	4.2	4.1	3.7	3.3	...	...
* MEAN	...	...	3.0	4.0	4.3	4.4	4.5	4.4	4.3	4.0	3.4	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	240	220	200	240	240	210	...	...	...
2	...	...	...	215	215	200	200	215	220	...a	...	...	...
3	...	...	...	...	225	210	...	230	...	...	...	...	...
4	...	...	...	235	220	225	195	185	230	235	230	...	...
5	...	...	...	240	220	...a	200	265	...c	...c	...	...	...
6	...	...	...	205	210	200	190	195	195	240	...	...	...
7	...	...	...	...	...	230	205	...a	215	210	215	...	...
8	...	...	...	240	220	220	210	210	210	215	...	...	...
9	...	...	...	190	225	225	205	200	200	220	...	...	...
10	...	...	...	235	215	215	220	205	205	225	...	...	...
11	...	...	...	215	225	220	250	230	220	190	...	...	...
12	...	...	...	...	230	210	210	235	205	...	...	...	...
13	...	...	...	210	235	230	230	215	205	205	220	...	...
14	...	...	...	...c	...c	...c	215	210	235	215	225	...	...
15	...	...	...	225	230	210	200	230	210	220	235	...	...
16	...	...	...	210	240	230	240	220	205	210	220	...	...
17	...	...	...	...	205	230	205	195	210	210	225	...	...
18	...	...	...	235	230	200	200	195	230	240	...	...	...
19	...	...	...	230	220	230	230	215	215	220	...	...	...
20	...	...	...	235	225	225	...a	...a	235	...a	...	...	...
21	...	...	...	...	220	225	225	205	190	225	...	...	...
22	...	...	...	230	210	245	225	230	215	215	...	...	...
23	...	...	...	...	230	210	225	190	200	...	...	...	...
24	...	...	...	...	210	230	210	200	200	210	...	...	...
25	...	...	...	...	210	230	195	200	200	...a	...	...	...
26	...	...	...	...	230	230	220	210	190	235	...	...	...
27	...	...	190	235	180	225	215	200	200	220	...	...	...
28	...	...	...	...	...	180	...	220	220	220	230	...	...
29	...	...	...	240	215	220	210	225	225	220	...	...	...
30	...	...	205	180	195	230	195	220	220	210	...	...	...
31	...	...	...	...	220	220	220	250	210	225	250	...	...
* MEAN	...	...	198	222	220	220	212	215	212	219	228	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE.

TABLE 194

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1942 | MAY 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.8	...
2	...	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.6	...e	...
3	...	...e	...e	0.7	0.6	0.6	0.8	0.7	0.7	0.8	0.7	...e	...
4	...	...e	0.7	0.6	0.7	0.8	0.7	0.8	0.7	0.7	0.6	...e	...
5	...	0.6	0.6	0.7	0.7	0.7	0.7	p0.7	...c	...c	...c	0.6	...
6	...	0.7	...c	0.7	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.6	...
7	...	0.6	0.6	...c	...c	0.6	0.8	0.8	0.8	0.7	0.6	...e	...
8	...	...e	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	...e	...e	...
9	...	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
10	...	0.5	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	...
11	...	0.7	0.8	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...
12	...	...e	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	...e	...
13	...	...e	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	...
14	...	...e	...e	...c	...c	...c	0.7	0.7	0.7	0.8	0.8	...e	...
15	...	...e	0.6	0.6	0.7	0.8	0.8	0.7	0.8	0.7	0.7	...e	...
16	...	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	...e	...
17	...	...e	0.6	0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.8	0.6	...
18	...	...e	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.6	...e	...
19	...	0.5	0.7	0.7	0.6	0.7	0.7	0.6	0.7	0.6	0.6	...e	...
20	...	...e	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.5	...
21	...	...e	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...e	...
22	...	...e	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	...
23	...	...e	0.6	0.5	0.6	0.5	0.6	0.7	0.6	0.6	0.6	0.6	...
24	...	...e	0.6	0.6	0.6	0.7	0.6	0.5	0.6	0.7	0.7	0.5	...
25	...	...e	...e	0.6	0.7	0.6	0.8	0.7	0.7	0.7	0.7	0.6	...
26	...	...e	...e	...e	0.6	0.6	0.6	0.7	0.7	0.[illegible]	0.7	0.5	...
27	...	...e	...e	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	...e	...
28	...	0.8	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.6	0.5	...e	...
29	...	...e	0.7	0.6	0.7	0.6	0.6	0.7	0.6	0.7	0.5	...e	...
30	...	...e	0.5	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.5	0.6	...
31	...	...e	...e	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	...
MEAN*	...	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.8	2.5	2.8	3.1	3.1	3.4	3.5	3.2	2.9	2.5	2.0	...
2	...	1.9	2.4	2.9	3.0	3.3	3.1	...a	3.0	...a	2.3	1.8	...
3	...	1.9	2.5	2.8	3.0	3.2	3.2	3.1	2.8	2.5	2.5	1.8	...
4	...	1.9	2.7	2.8	3.0	3.1	3.0	3.0	3.1	2.9	2.4	1.8	...
5	...	2.0	2.2	2.6	2.9	3.1	3.1	3.1	...c	...c	...c	1.8	...
6	...	1.8	...c	2.6	3.0	3.0	3.0	3.0	3.0	2.9h	2.4	1.8	...
7	...	1.8	2.3	...c	...c	3.2	3.3	...a	3.0	2.8	2.2	1.7	...
8	...	1.9	2.4	2.7	3.0	3.1	3.3	3.1	3.0	2.6	2.5	1.7	...
9	...	1.9	2.4	2.8	3.0	3.1	3.0	3.3	3.1	2.8	2.4	1.8	...
10	...	1.7	2.6	2.9	3.0	3.1	3.1	3.1	3.1	2.9	2.5	1.9	...
11	...	1.8	2.5	2.9	3.0	3.1	3.2	3.1	3.0	3.0	p2.4a	1.8	...
12	...	2.0	2.4	2.9	3.1	3.2	3.2	3.2	3.1	2.8	...a	...a	...
13	...	1.7	2.5	2.9	3.1	3.4	3.2	3.3	3.2	2.9	2.5	1.6	...
14	...	1.7	2.4	...c	...c	...c	3.3	3.3	3.0	2.9	2.4	...	...
15	...	1.6	2.6	3.0	3.1	3.3	3.1	3.3	3.2	3.0	2.7	1.8	...
16	...	1.9	2.4	2.7	3.3	3.2	3.3	3.1	3.2	2.9	2.5	1.8	...
17	...	1.8	2.5	2.9	3.1	3.0	3.3	3.3	3.1	2.9	2.5	1.8	...
18	...	1.9	2.4	2.8	3.1	3.2	3.2	3.2	3.0	2.8	2.3	1.8	...
19	...	1.6	2.4	3.0	3.0	3.3	3.2	3.3	3.1	3.0	2.4	1.7	...
20	...	1.9	2.6	3.0	3.0	3.2	3.3	3.3	3.1	2.9	2.4	2.0	...
21	...	1.9	2.2	2.9	3.1	3.2	3.3	3.2	3.0	2.7	2.4	1.8	...
22	...	1.8	2.4	3.0	3.0	3.0	3.3	3.1	3.3	2.8	2.4	1.8	...
23	...	1.7	2.5	2.8	3.1	3.1	3.2	3.1	3.0	3.0	2.5	1.5	...
24	...	1.5	2.2	2.7	3.0	2.8	2.8	3.1	2.9	2.8	2.3	1.9	...
25	...	1.8	2.3	2.9	2.8	3.1	3.1	3.1	3.0	...a	2.5	...a	...
26	...	1.7	2.4	2.9	3.1	3.0	3.2	3.0	3.0	2.6	2.2	1.5	...
27	...	1.4	2.3	2.7	2.9	3.0	3.1	3.1	3.0	2.8	2.2	1.5	...
28	...	...h	2.3	2.6	2.8	3.0	3.0	3.0	2.8	2.9	2.2	1.5	...
29	...	1.7	2.5	2.7	2.8	3.1	3.0	3.4	3.1	2.7	2.3	1.6	...
30	...	1.6	2.1	2.5	2.7	3.4	3.0	2.8	3.2	2.5	2.3	1.5	...
31	...	1.9	2.5	3.2	3.2	3.1	3.0	2.9	2.6	2.5	2.4	1.6	...
MEAN*	...	1.8	2.4	2.8	3.0	3.1	3.2	3.2	3.0	2.8	2.4	1.7	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 195

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1942

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED — 120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.3	3.4	3.3	3.5	4.7	4.6	3.7	4.1	4.8	6.0	5.7	6.4	6.5	7.0	5.7	6.3	6.0	5.7	3.8	2.8	2.9	3.2	3.6	4.0	4.6
2	3.6	3.5	3.9	...c	...c	...c	...c	...c	...c	...c	5.6	6.0	5.2	6.1	6.4	6.2	6.5	5.1	3.2	2.8	2.8	2.9	2.8	2.9	...
3	...f	2.6	3.0	2.7	2.7	2.5	2.2	3.4	5.0	5.0	4.8	5.4	5.5	5.2	6.5	6.8	5.8	4.7	4.3	3.5	2.3	2.3	2.4	2.6	...
4	3.1	3.0	3.0	3.5	3.3	2.6	2.3	3.8	4.9	6.0	6.2	6.0	6.0	5.8	5.6	5.4	6.1	5.7	3.5	2.6	2.3	2.8	2.9	2.9	4.1
5	3.0	3.2	2.8	3.0	3.2	3.2	2.3	3.8	5.1	5.5	6.1	6.5	7.0	5.8	6.1	p5.6c	5.2	6.0	4.5	2.9	3.1	2.9	p3.1a	3.4	4.3
6	2.7	3.1	3.1	3.5	3.5	2.9	2.4	3.7	4.8	5.3	6.8	6.2	6.3	6.6	5.7	6.3	6.6	5.5	3.9	3.1	3.3	3.0	3.3	3.6	4.4
7	3.3	3.5	4.0	3.2	3.2	3.4	3.4	4.1	4.8	4.8	5.4	5.3	6.3	5.8	6.0	6.0	6.8	5.9	4.0	2.5	2.9	3.1	3.3	3.7	4.4
8	3.7	4.0	3.5	3.8	3.8	3.6	3.0	3.6	4.6	5.7	6.1	7.0	5.8	6.5	6.5	6.0	6.6	5.0	3.3	2.4	2.5	3.0	3.3	3.1	4.4
9	2.6	3.2	3.3	3.6	3.5	3.1	2.9	4.1	5.7	6.8	5.8	5.6	5.9	6.2	5.5	6.5	5.2	5.3	4.6	2.7	2.9	3.0	3.0	2.7	4.3
10	2.7	3.1	3.5	3.6	4.0	4.1	3.7	4.0	5.0	4.9	6.1	5.5	6.4	5.1	6.0	5.9	7.0	5.9	3.8	2.3	2.8	3.0	3.2	3.5	4.4
11	3.5	3.3	3.5	3.5	3.2	2.9	2.6	4.0	5.0	4.9	5.7	5.5	6.3	5.6	6.0	6.0	5.9	5.8	3.3	2.6	2.9	3.2	3.5	3.8	4.3
12	3.8	3.6	3.7	3.8	3.7	2.4	2.6	3.8	p5.4	6.8	7.3	7.2	7.3	6.6	6.7	6.7	6.0	5.4	3.7	2.9	3.0	3.5	3.6	3.7	4.7
13	3.5	3.2	2.8	3.2	3.2	2.9	2.9	3.6	4.8	5.8	7.0	6.4	6.4	7.1	6.0	6.4	6.1	5.6	3.3	2.7	3.0	3.0	3.4	2.5	4.4
14	3.0	3.0	3.8	3.6	4.2	2.8	2.6	3.9	5.5	5.2	6.5	6.5	6.6	6.8	6.2	7.3	6.5	5.8	4.8	3.1	3.3	3.6	3.6	3.5	4.6
15	4.0	4.2	4.6	4.4	3.2	2.7	2.9	3.2	5.5	5.9	5.9	6.1	5.6	6.5	7.2	6.6	5.7	5.1	3.4	2.6	2.4	2.6	2.9	3.0	4.4
16	3.3	3.8	4.1	3.6	3.6	3.5	3.0	4.4	6.2	5.5	6.1	6.0	6.3	6.5	6.0	7.6	7.2	5.4	3.4	2.1	2.6	3.0	3.3	3.2	4.6
17	3.3	3.4	3.5	3.3	3.7	3.0	2.7	4.0	5.6	5.2	6.2	5.7	6.6	6.5	7.5	8.6	7.0	5.5	3.7	3.2	2.5	2.6	3.3	3.8	4.6
18	3.8	4.0	3.8	3.8	4.0	3.4	2.7	3.8	5.1	5.5	6.1	6.3	6.5	5.9	6.0	6.8	6.7	5.9	3.6	2.6	2.7	2.4	2.5	3.0	4.4
19	3.0	3.0	3.0	3.0	3.1	2.6	2.4	3.5	5.1	5.7	5.4	5.6	5.6	6.0	5.3	6.6	6.2	5.7	4.3	2.6	2.7	3.2	3.3	3.3	4.2
20	3.2	3.6	3.6	3.5	3.5	2.8	2.2	3.2	5.3	5.8	6.8	7.0	7.0	7.2	6.5	7.4	5.8	5.2	4.0	3.2	3.4	2.9	3.2	3.7	4.6
21	4.0	3.8	3.6	3.6	4.1	4.1	3.3	3.9	5.3	5.5	6.7	6.2	6.7	6.6	6.0	6.1	7.5	5.5	3.3	2.6	3.1	3.2	3.5	3.5	4.6
22	3.3	3.4	3.3	3.6	4.4	2.8	2.4	3.4	5.0	5.6	6.3	6.2	6.2	6.4	6.0	6.4	6.2	5.0	3.5	3.0	2.9	2.4	2.5	2.6	4.3
23	3.0	3.4	3.7	3.9	3.6	3.6	2.7	3.7	4.5	4.9	5.5	7.1	6.6	5.6	7.1	6.9	5.5	4.3	3.3	2.5	2.6	3.0	3.2	3.3	4.3
24	3.4	3.5	3.7	3.3	3.4	3.0	3.0	3.3	5.0	5.4	6.2	6.4	6.6	8.1	7.0	6.0	6.0	5.1	4.0	2.8	2.9	3.0	3.7	3.8	4.5
25	3.8	3.4	2.6	3.1	3.3	3.0	2.6	3.5	4.8	5.6	6.5	5.8	6.3	7.3	6.6	6.6	5.5	4.4	4.4	2.7	3.0	3.5	3.5	3.2	4.4
26	3.1	3.6	3.8	3.7	3.7	3.2	2.7	3.8	5.3	5.9	6.5	5.4	6.7	6.5	6.3	6.8	5.6	4.8	3.7	2.6	2.3	2.7	3.4	3.3	4.4
27	3.7	4.0	3.4	3.6	3.5	3.3	2.6	3.4	4.5	5.4	5.7	5.5	5.8	6.5	p7.0c	7.7	5.9	4.5	3.1	2.8	2.5	3.3	3.3	3.6	4.4
28	4.5	4.0	4.0	4.5	3.3	2.9	2.7	3.6	4.8	5.4	6.0	5.2	5.2	6.5	5.7	6.4	5.6	5.2	3.8	3.0	2.9	2.9	3.3	3.5	4.4
29	3.4	3.8	3.5	3.5	3.6	3.2	2.9	3.3	4.4	5.6	6.1	5.2	7.1	6.7	6.1	6.2	5.6	4.9	3.6	3.0	3.0	3.2	3.2	3.2	4.4
30	2.8	2.7	3.3	3.7	4.3	3.3	3.6	4.1	5.2	5.0	5.4	5.9	6.5	7.9	7.0	7.2	5.0	5.2	3.3	2.6	3.0	2.7	3.2	3.4	4.4
31																									
MEAN*	3.4	3.4	3.5	3.5	3.6	3.2	2.8	3.7	5.1	5.5	6.1	6.0	6.3	6.4	6.3	6.6	6.1	5.3	3.8	2.8	2.8	3.0	3.2	3.3	4.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 196

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	225	230	210	250	220	200	220	215	220	245	250	260	270	260	255	240	235	210	200	200	250	250	230	250	233
2	220	250	255	...c	...c	...c	...c	...c	...c	...c	265	265	250	270	240	240	230	205	200	210	220	220	270	240	...
3	270	220	275	245	260	220	220	210	220	230	210	280	290	255	255	245	225	215	200	...a	...a	230	245	260	...
4	240	270	275	255	225	200	200	205	220	250	260	220	250	270	265	270	230	190	200	220	225	230	240	215	234
5	235	250	240	260	245	220	215	210	225	250	255	270	240	260	260	...c	250	220	200	240	230	220	...a	190	...
6	260	265	270	265	230	200	210	215	220	205	255	240	250	225	230	240	215	200	220	...a	220	235	250	230	...
7	240	250	215	220	245	230	205	210	205	225	255	270	245	255	240	270	230	200	...a	200	260	260	240	235	...
8	220	230	205	215	220	200	210	215	220	215	285	245	275	270	270	235	220	...a	...a	...a	240	270	250	210	...
9	260	250	225	210	230	210	230	225	220	220	260	250	260	300	260	250	215	220	215	215	220	235	230	220	235
10	235	220	230	210	220	220	200	195	230	220	250	245	270	430	250	290	240	210	195	300	240	220	230	235	241
11	235	240	250	220	235	235	210	205	230	220	240	265	260	275	265	245	205	205	210	230	235	250	265	245	236
12	230	245	225	240	200	270	220	235	p225	255	270	265	255	270	250	250	240	220	215	240	220	225	250	240	240
13	225	225	250	255	245	235	210	230	230	260	275	290	265	280	235	225	230	220	190	235	230	240	230	205	238
14	260	250	255	230	210	195	245	235	230	230	255	265	260	255	260	235	240	220	...a	200	220	235	235	270	...
15	240	270	235	200	235	...a	...a	185	225	235	275	245	285	270	260	250	230	210	210	230	...a	255	240	230	...
16	215	240	230	225	240	220	230	215	210	225	265	260	265	260	250	230	...a	...a	...a	...a	240	255	230	235	...
17	240	220	225	230	210	220	195	220	220	230	250	255	280	270	285	230	215	210	200	225	190	...a	260	250	...
18	230	235	240	240	225	220	220	210	210	245	260	225	275	250	260	270	240	220	195	220	220	210	250	270	235
19	250	250	230	235	230	200	215	220	230	235	240	245	275	255	225	225	230	205	190	220	...c	...c	...c	240	...
20	250	245	225	260	245	195	190	245	250	225	250	275	290	270	245	250	230	210	230	200	...a	200	245	230	...
21	225	220	235	230	230	210	210	220	220	210	235	280	265	265	240	260	230	205	215	250	230	235	240	225	233
22	220	225	220	240	220	190	235	220	220	220	240	260	240	275	265	250	220	200	205	220	205	230	230	225	228
23	250	240	230	230	230	210	220	210	215	230	270	240	255	240	275	245	210	200	...a	...a	220	230	220	240	...
24	250	210	230	260	235	225	200	220	220	230	285	280	270	260	245	240	230	215	...a	...a	...a	270	260	260	...
25	220	220	200	°220	215	200	230	215	225	270	260	290	280	260	270	250	220	210	210	200	245	225	...a	215	...
26	250	240	220	240	205	200	250	235	230	265	250	235	255	250	235	235	230	210	225	...a	...a	...a	250	245	...
27	250	235	220	240	230	220	190	215	230	230	280	230	260	270	p260c	250	220	200	205	210	210	210	215	250	230
28	225	250	250	210	205	215	220	220	205	250	260	235	320	240	300	240	215	215	205	...a	...a	250	250	230	...
29	250	235	250	250	235	240	235	225	210	270	240	300	270	240	280	250	235	215	215	250	225	225	225	210	241
30	230	250	250	235	220	200	230	220	240	230	290	280	290	270	260	230	p220a	215	220	210	220	p230a	255	235	239
31																									
MEAN*	214	239	236	235	227	214	216	217	223	235	258	259	267	267	256	246	227	210	207	224	227	235	242	234	234

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 197

JUNE 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	3.3	4.0	4.1	4.1	4.0	4.0	3.8	...	...	...
2	...	...	...	...	4.0	3.9	3.9	4.0	3.9	3.7	...	...	...
3	...	...	...	...	...	4.2	4.1	4.1	3.9	3.8	3.2	...	...
4	...	...	...	3.7	4.0	4.1	4.0	4.1	3.8	3.7	...	...	...
5	...	...	...	...	4.1	4.2	4.3	4.3	3.8	...	...	...	...
6	...	...	2.6	...	3.9	3.8	4.2	4.1	4.0	...	...	...	...
7	...	...	...	3.6	3.8	4.2	...	...	4.1	3.6	...	...	...
8	...	...	...	...	4.1	4.2	4.2	4.0	4.0	3.7	...	...	...
9	...	...	...	...	4.1	4.1	4.2	4.4	4.0	3.5	...	...	...
10	...	...	...	...	4.0	4.2	4.3	4.7	4.1	4.1	...	...	...
11	...	...	...	...	4.0	4.2	4.2	4.2	3.8	...	...	...	...
12	...	...	...	3.8	4.1	4.2	4.3	4.3	4.3	3.7	...	...	...
13	...	...	...	3.9	4.1	4.3	4.1	4.3	4.0	...	...	...	...
14	...	...	...	...	4.0	4.2	4.2	4.3	4.0	...	...	...	...
15	...	...	...	...	...	4.1	4.2	4.2	4.0	3.9	3.0	...	...
16	...	...	...	3.5	4.1	4.2	4.3	4.3	4.1	4.0	...	...	...
17	...	...	...	...	4.0	4.2	4.1	4.2	4.2	3.9	3.2	...	...
18	...	...	...	...	...	...	...a	4.1	3.8	3.6	...	...	...
19	...	...	...	3.6	4.0	4.1	4.0	4.2	...	...	...	...	...
20	...	...	...	...	4.0	4.2	4.3	4.2	3.5	3.6	...	...	...
21	...	...	...	3.1	3.8	4.1	4.0	4.0	3.8	4.0	...	...	...
22	...	...	...	...	4.0	4.1	4.1	4.3	4.1	3.9	...	...	...
23	...	...	...	...	4.0	4.1	4.2	...c	...c	3.8	3.1	...	...
24	...	...	...	...	4.2	4.1	4.2	4.2	4.0	3.7	...	...	...
25	...	...	...	3.9	4.0	4.3	4.2	4.1	3.7	3.8	3.0	...	...
26	...	...	...	3.9	4.0	4.0	4.2	4.1	4.0	3.5	...	...	...
27	...	...	...	...	4.0	4.2	4.0	4.1	p4.0c	3.8	...	...	...
28	...	...	...	...	4.0	4.0	4.2	4.1	4.0	...	...	...	...
29	...	...	...	...	3.9	4.2	4.1	4.1	4.0	3.7	...	...	...
30	...	...	...	3.2	4.1	4.2	4.1	4.0	3.9	3.7	...	...	...
31													
* MEAN	...	...	2.6	3.6	4.0	4.1	4.2	4.2	4.0	3.8	3.1	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	200	220	225	185	210	210	230	...	...	...
2	...	...	...	...	200	180	200	225	225	230	...	...	...
3	...	...	...	...	...	180	...a	220	...a	240	220	...	...
4	...	...	...	245	230	215	200	215	...a	230	...	...	...
5	...	...	...	...	250	240	...a	190	200	...	...	...	...
6	...	...	...	...	210	200	200	...h	200	...	...	...	...
7	...	...	...	210	190	...a	...	...	240	200	...	...	...
8	...	...	...	...	200	225	210	...a	...a	220	...	...	...
9	...	...	...	...	225	215	200	210	220	200	...	...	...
10	...	...	...	...	230	215	200	...a	175h	230	...	...	...
11	...	...	...	...	245	200	...a	220	215	...	...	...	...
12	...	...	...	240	215	235	220	215	215	...a	...	...	...
13	...	...	...	230	210	230	195	170h	200	...	...	...	...
14	...	...	...	...	235	235	220	215	220	...	...	...	...
15	...	...	...	...	...	210	...h	...a	240	230	200	...	...
16	...	...	...	220	215	210	220	220	215	240	...	...	...
17	...	...	...	...	230	190	...a	235	...a	240	210	...	...
18	...	...	...	...	...	...	...a	...a	200	235	...	...	...
19	...	...	...	230	210	210	190	...a	...	...	...	...	...
20	...	...	...	...	...a	...a	...h	230	215	215	...	...	...
21	...	...	...	200	220	215	220	205	200	190	...	...	...
22	...	...	...	...	215	210	190	175	205	240	...	...	...
23	...	...	...	...	205	200	200	...c	...c	230	190	...	...
24	...	...	...	...	210	215	200	230	220	215	...	...	...
25	...	...	...	220	250	220	235	200	200	225	205	...	...
26	...	...	...	235	210	200	210	...a	220	...a	...	...	...
27	...	...	...	...	230	220	200	...c	...	...	...	...	...
28	...	...	...	...	225	205	215	200	180	...	...	...	...
29	...	...	...	...	210	210	215	195	200	240	...	...	...
30	...	...	...	205	200	220	...a	...a	...a	210	...	...	...
31													
* MEAN	...	...	...	221	218	213	206	209	210	224	205	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 198

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1942 JUNE 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.7	...e	...
2	...	...	...c	...c	...c	0.7	0.7	0.6	0.7	0.6	0.6	0.5	...
3	...	...	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...
4	...	...	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	...e	...
5	...	...	0.5	0.7	0.7	0.7	0.8	0.7	0.7	...c	0.6	...e	...
6	...	...	...c	...e	0.6	0.6	0.6	0.6	0.5	0.5	...e	...e	...
7	...	...	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.5	...e	...e	...
8	...	...	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.6	0.6	...
9	...	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...
10	...	...	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.6	...e	...
11	...	...	0.6	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	...
12	...	...	p0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.7	0.7	...
13	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...e	...
14	...	...	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.7	...e	...
15	...	...	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.6	...
16	...	...	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5	...e	...
17	...	...	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	...e	...
18	...	...	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.6	...e	...e	...
19	...	...	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.5	0.6	0.6	...
20	...	...	0.7	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	...e	...
21	...	...	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.6	...e	...
22	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...e	...
23	...	...	...e	0.5	0.6	0.6	0.6	0.6	0.5	0.7	...e	...e	...
24	...	...	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	...e	...
25	...	...	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.5	0.7	...e	...
26	...	...	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	...
27	...	...	0.5	0.7	0.6	0.7	0.6	0.7	...c	0.7	0.7	0.6	...
28	...	...	...e	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...
29	...	...	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.6	0.5	...
30	...	...	...e	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.6	...
31													
* MEAN	...	...	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.5	2.1	2.5	3.0	3.0	3.0	3.1	3.0	2.6	2.4	1.5	...
2	...	...c	...c	...c	2.8	3.1	3.1	3.1	2.8	2.7	2.1	1.6	...
3	...	1.6	2.1	2.8	3.0	3.1	3.2	3.1	2.8	2.9	2.4	1.8	...
4	...	1.4	2.2	3.0	3.0	3.1	3.1	...a	...a	...a	2.3	1.5	...
5	...	1.5	2.2	2.6	3.2	3.2	3.1	2.8	2.7	...c	...a	...a	...
6	...	1.6	...c	2.5	2.9	3.0	3.0	2.9	2.9	2.6	...a	...a	...
7	...	1.4	2.0	2.8	2.9	3.0	3.0	3.0	2.8	2.7	...a	2.5	...
8	...	1.6	2.5	2.8	2.9	3.1	3.0	3.1	2.8	...a	2.5	1.6	...
9	...	1.6	2.5	2.9	2.9	3.2	3.1	3.2	2.9	2.6	2.3	1.6	...
10	...	1.5	2.1	2.8	3.0	3.1	3.1	p3.0a	3.0	2.7	2.3	2.0	...
11	...	1.5	2.4	2.9	2.9	3.0	3.1	3.1	2.8	2.7	2.2	1.7	...
12	...	1.5	p2.0	2.7	2.8	3.0	3.0	3.0	2.9	3.0	2.3	1.6	...
13	...	...	2.1	2.6	2.8	2.9	3.0	2.9	2.8	2.5	2.2	1.6	...
14	...	1.5	2.2	2.7	3.0	3.0	2.9	2.9	2.7	2.5	2.4	...a	...
15	...	...	2.0	2.5	2.8	3.0	3.0	...a	2.9	2.5	2.3	1.5	...
16	...	1.5	2.3	2.7	2.9	3.1	3.2	...a	...a	3.0	...a	...a	...
17	...	1.5	2.3	2.9	2.9	3.0	3.0	3.0	2.9	2.8	2.3	1.7	...
18	...	1.4	2.1	2.7	3.0	3.0	3.0	3.0	2.9	2.8	...a	1.4	...
19	...	1.3	2.3	2.8	2.9	3.0	3.0	3.0	2.8	2.8	2.3	1.5	...
20	...	1.4	2.3	2.5	3.1	2.9	3.0	3.0	3.0	2.6	...a	...a	...
21	...	1.4	2.3	2.5	2.9	2.9	3.0	3.0	2.8	2.6	2.5	1.5	...
22	...	1.5	2.1	2.8	2.8	2.9	3.0	3.0	3.0	2.8	2.3	...a	...
23	...	1.3	2.3	2.7	2.9	2.9	3.1	2.9	2.9	2.8	2.3	...a	...
24	...	1.6	2.2	2.5	2.8	3.1	3.0	3.0	2.8	2.7	2.2	1.7	...
25	...	1.5	2.3	2.7	2.7	3.0	2.9	2.8	2.8	2.7	2.3	1.7	...
26	...	1.4	2.2	2.6	2.8	2.8	3.0	2.9	2.9	...a	...a	1.7	...
27	...	1.4	2.0	2.4	2.8	3.0	3.0	3.0	p2.8c	2.6	2.3	1.5	...
28	...	1.5	2.5	2.4	2.8	2.9	3.0	3.0	2.8	2.8	2.3	1.5	...
29	...	1.3	2.1	2.6	2.7	2.9	2.9	2.8	2.8	2.5	2.2	1.5	...
30	...	1.4	1.9	2.4	2.6	2.8	2.7	p2.7a	p2.7a	2.7	p2.2a	1.6	...
31													
* MEAN	...	1.5	2.2	2.7	2.9	3.0	3.0	3.0	2.8	2.7	2.3	1.6	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 199

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JULY 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.3	3.4	3.9	3.9	3.0	2.6	2.2	3.3	5.0	5.3	6.3	5.7	5.4	6.0	5.9	5.8	5.3	5.8	3.9	3.7	3.1	2.9	3.2	3.6	4.3
2	3.0	2.8	3.3	2.8	3.3	3.0	2.5	3.6	5.1	5.5	5.8	5.8	5.5	6.1	6.0	7.5	6.0	4.6	3.3	2.6	2.6	2.9	2.9	3.0	4.2
3	3.1	3.1	3.3	3.3	...f	...f	2.6	3.5	4.7	5.4	5.2	5.9	6.0	6.3	5.5	5.7	6.3	6.2	4.2	3.4	3.1	3.3	3.3	4.0	...
4	3.9	3.4	3.5	3.9	3.8	3.4	2.8	3.3	4.9	4.8	5.2	5.7	6.0	6.0	4.8	6.3	5.3	5.1	4.6	2.9	3.1	3.5	3.3	2.6	4.2
5	3.0	3.3	3.8	3.6	4.1	3.5	3.7	3.8	4.5	5.0	5.0	5.9	5.5	5.7	5.0	5.8	5.5	4.9	3.9	3.0	3.2	3.2	3.5	3.4	4.2
6	3.8	3.6	3.1	3.6	3.9	3.9	3.3	4.2	5.1	6.0	4.9	5.3	6.5	5.7	7.0	5.4	6.1	5.8	6.2	4.1	2.9	3.1	3.4	3.6	4.6
7	4.2	3.9	3.8	3.9	4.6	4.0	3.3	3.3	5.0	5.6	6.0	5.7	6.2	6.2	5.7	5.4	6.0	5.7	4.1	2.4	2.9	3.0	3.2	3.2	4.5
8	3.3	3.1	3.5	3.8	3.5	2.7	2.5	3.3	4.9	5.7	6.1	5.2	6.5	6.2	5.6	6.6	6.9	5.5	5.0	3.6	3.0	2.9	3.7	4.0	4.5
9	3.0	...f	...f	...f	...f	...f	2.0	4.3	4.6	5.6	6.0	5.6	5.5	6.0	6.4	5.9	5.5	6.1	4.0	3.8	2.8	3.0	3.0	3.3	...
10	3.3	3.9	p2.9f	1.9	2.0	...f	...f	4.0	4.8	5.6	5.7	6.0	5.9	6.9	6.7	p6.3c	6.0	5.3	4.4	2.8	3.0	3.5	3.2	2.6	...
11	2.6	2.6	2.5	3.8	3.8	3.5	2.6	3.8	4.7	6.3	7.0	p7.0c	6.9	7.0	6.4	6.7	7.8	7.3	7.4	5.0	2.9	3.0	2.5	2.7	4.8
12	3.2	3.8	3.6	4.2	3.3	2.2	1.9	3.5	6.5	6.2	6.0	5.9	6.8	6.5	5.9	7.0	6.7	5.3	4.0	2.5	2.3	2.4	3.3	3.4	4.4
13	3.3	2.0	2.2	2.3	2.4	2.7	2.3	3.7	4.9	5.1	5.5	6.0	6.0	5.9	7.1	6.6	7.1	5.8	4.7	2.8	2.4	p2.7f	3.0	2.5	4.1
14	2.4	2.7	2.9	2.8	3.1	3.1	2.5	3.6	5.5	5.7	6.3	6.6	6.2	7.0	6.3	7.0	6.0	5.2	4.0	3.0	2.3	2.5	3.2	3.3	4.3
15	3.2	3.1	2.8	3.0	3.3	3.3	2.3	3.4	5.3	5.0	6.0	6.8	6.5	5.7	7.2	6.5	6.4	5.8	4.4	p3.5a	2.6	3.0	2.9	3.2	4.4
16	3.3	3.5	3.4	3.3	3.2	2.6	2.2	3.3	5.5	5.2	5.9	6.3	6.2	7.2	8.0	6.6	6.6	5.4	4.2	3.3	3.3	3.6	3.5	3.1	4.5
17	3.4	3.6	3.9	4.0	4.6	4.2	p3.8f	3.4	5.1	5.6	5.0	6.4	6.3	7.3	7.0	6.7	6.0	5.3	4.4	2.4	2.4	2.8	2.9	2.8	4.6
18	3.1	3.2	3.4	3.4	3.6	3.1	2.2	3.2	4.3	5.0	4.9	5.3	5.5	5.7	p6.0a	p6.1a	5.3	5.3	4.6	p2.1a	2.4	2.5	2.6	2.4	4.0
19	2.5	2.5	2.8	3.2	3.3	3.0	2.6	3.5	4.4	4.7	5.9	5.4	5.4	5.8	5.0	5.5	5.5	5.3	4.0	2.4	2.3	2.7	3.0	3.3	3.9
20	3.2	3.0	2.9	3.0	2.8	1.8	1.6	3.3	4.9	5.5	5.2	5.4	5.5	6.4	5.2	5.1	5.2	5.5	3.5	3.2	2.6	2.9	3.0	3.1	3.9
21	3.2	3.6	2.9	3.0	3.0	2.4	2.4	3.2	5.1	6.0	6.1	6.0	6.4	5.7	5.8	p6.2	5.4	4.8	4.2	2.9	2.9	2.4	2.8	3.2	4.2
22	3.0	3.5	3.9	4.2	4.6	2.8	2.6	3.5	5.1	5.8	6.0	6.6	5.8	6.0	p5.7	5.9	6.0	5.2	3.9	3.0	3.3	3.2	3.5	3.5	4.4
23	3.0	3.3	3.7	3.9	3.6	3.5	2.6	3.8	5.1	5.3	5.5	5.2	6.8	6.0	5.2	6.2	5.4	5.0	3.6	2.8	2.9	3.4	3.1	3.3	4.3
24	3.5	3.3	3.4	3.6	3.8	3.0	2.8	3.5	5.3	5.6	5.4	6.0	5.8	5.9	5.9	5.9	6.6	5.2	3.9	2.6	2.3	2.5	2.7	2.9	4.2
25	3.0	3.0	3.1	3.0	2.9	2.6	2.2	3.4	4.5	4.7	5.2	4.8	5.8	5.7	5.3	5.5	5.4	5.0	4.0	3.1	2.9	2.9	3.1	3.5	3.9
26	3.3	3.6	3.1	3.1	3.3	3.5	p3.0f	3.5	4.6	4.7	5.1	4.9	4.5	5.3	4.8	5.2	4.7	4.5	3.3	2.4	p2.4f	2.7	3.1	3.3	3.8
27	3.6	3.6	3.7	p3.9f	3.6	3.3	3.0	3.8	4.6	4.8	5.2	5.7	5.1	5.0	5.1	5.5	5.5	6.0	4.4	2.8	2.3	2.2	2.3	2.4	4.1
28	2.7	...f	3.5	2.3	2.4	2.6	2.5	3.5	4.2	4.6	4.9	5.3	5.2	5.6	5.4	6.0	5.0	5.1	4.1	2.4	2.3	2.7	2.3	2.5	...
29	2.6	2.8	2.7	2.5	2.4	2.4	2.4	3.6	4.2	4.3	4.6	5.0	5.4	5.1	5.2	5.5	5.3	5.4	4.8	2.4	2.5	2.8	3.0	3.0	3.7
30	2.8	3.0	3.0	3.4	3.3	2.7	2.5	3.9	4.2	5.1	4.8	5.0	5.5	5.8	5.6	5.5	4.7	4.5	4.6	...a	...a	2.9	2.9	3.1	...
31	3.3	2.7	3.0	3.3	3.1	2.8	2.9	3.7	4.5	5.5	5.7	6.1	5.1	5.8	6.1	5.3	5.5	4.9	4.3	3.3	2.6	2.5	3.1	3.1	4.1
MEAN*	3.2	3.2	3.2	3.3	3.4	3.0	2.6	3.6	4.9	5.3	5.6	5.8	5.9	6.0	5.9	6.0	5.8	5.4	4.3	3.0	2.7	2.9	3.0	3.1	4.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 200

JULY 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1942

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	250	...a	215	205	205	225	200	210	235	245	265	200	265	265	255	220	210	210	210	195	250	240	210	...
2	200	230	230	250	240	225	220	230	215	245	240	250	260	240	p240a	240	220	210	p215a	220	p230a	240	250	235	232
3	240	250	225	220	...a	205	200	215	220	230	270	240	270	250	250	245	230	220	200	215	200	200	200	220	...
4	200	230	230	240	230	200	200	210	225	220	270	255	270	240	230	250	...a	210	200	210	220	215	190	195	...
5	230	225	240	240	245	205	200	200	215	225	265	250	280	270	250	230	260	210	200	190	210	215	220	240	230
6	225	220	230	230	230	210	210	210	215	230	235	190	310	305	240	275	240	205	200	190	p185	205	215	230	226
7	230	230	260	245	220	205	190	215	230	250	250	270	265	260	285	235	230	230	205	190	220	225	215	230	233
8	210	220	245	230	240	p225a	210	200	230	240	245	255	295	280	260	300	230	215	200	230	200	250	250	220	237
9	235	p240a	250	260	220	180	215	215	210	230	280	260	285	260	245	230	215	230	p225a	215	p215a	215	225	230	233
10	255	230	255	270	220	200	200	195	220	230	245	250	285	245	240	p240c	235	220	200	230	240	215	210	200	230
11	250	250	260	230	220	205	230	210	225	260	255	p270c	290	230	280	280	250	250	205	195	230	230	230	300	243
12	300	265	235	220	200	215	310	260	230	230	245	270	275	250	260	275	205	220	200	240	270	290	270	230	249
13	...a	...a	...a	280	...a	250	190	210	220	245	250	275	305	285	260	270	240	220	...a	...a	225	...a	220	210	...
14	240	250	270	265	245	240	...a	...a	230	230	240	270	235	250	290	250	245	205	p210a	210	220	260	260	235	...
15	230	215	235	240	230	p220a	205	225	220	240	270	250	250	285	240	270	230	215	210	...a	...a	...a	270	275	...
16	280	210	240	225	215	215	260	200	235	235	260	275	280	260	260	250	230	225	...a	...a	...a	240	250	265	...
17	...a	240	240	230	210	215	...	230	230	240	200	...a	250	275	265	265	230	220	200	200	240	230	230	250	...
18	245	230	235	250	235	210	190	210	235	235	290	305	305	260	...a	...a	225	260	200	...a	265	200	230	250	...
19	250	270	235	250	235	200	220	205	230	225	280	250	335	265	290	290	230	200	215	...a	220	250	230	250	...
20	250	255	255	260	...a	180	230	230	230	250	240	260	320	270	280	270	250	230	...c	220	245	220	270	265	...
21	250	230	200	230	220	260	250	250	200	255	235	285	265	270	295	p240	235	215	200	225	225	220	260	260	241
22	250	250	250	225	200	195	230	220	230	235	250	250	240	265	p250	255	230	220	200	195	225	240	220	220	231
23	220	260	255	250	...a	...a	220	220	230	225	250	285	290	250	300	260	230	235	210	200	225	210	225	230	...
24	235	240	240	240	215	200	220	215	230	205	235	230	260	360	265	270	220	210	200	210	...a	260	250	255	...
25	245	245	245	245	225	225	215	225	230	270	285	360	310	285	290	290	250	240	220	220	220	270	265	265	256
26	260	240	220	240	245	290	280	245	230	255	295	290	320	305	315	260	240	230	250	250	260	260	245	255	262
27	230	230	250	p240f	230	220	225	250	235	290	270	270	270	310	290	315	305	235	220	220	220	210	p240f	245	251
28	270	...f	250	270	240	235	235	250	235	200	320	300	310	260	315	260	205	220	200	220	250	220	240	260	...
29	260	250	235	230	260	245	225	235	275	215	310	290	280	300	280	275	265	230	200	190	235	230	225	220	248
30	235	245	240	240	210	225	230	210	195	270	265	335	270	275	260	280	230	220	...a	...a	...a	235	230	230	...
31	215	230	260	270	200	215	220	215	210	270	280	245	310	320	270	270	240	220	210	205	225	...a	275	220	...
MEAN*	242	231	242	243	225	217	223	220	225	239	260	268	280	272	269	263	236	222	208	212	226	232	237	239	239

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 201

JULY 1942 JULY 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	3.4	4.1	...	4.1	4.0	3.6	...	...	...
2	...	...	...	...	3.9	4.0	4.1	...a	...a	...	...	...	...
3	...	...	...	...	4.0	...a	...a	4.3	4.0	...	...	...	...
4	...	...	...	...	4.0	4.1	4.2	4.1	4.0	3.6	...	...	...
5	...	...	...	...	4.2	4.0	4.2	4.0	...	...	...	...	...
6	...	...	...	...	...	...	4.4	4.5	4.2	3.9	...	...	...
7	...	...	...	...	4.0	4.2	4.2	4.2	4.1	...	...	...	...
8	...	...	...	...	4.0	4.2	4.3	4.3	...	4.0	...	...	...
9	...	...	...	...	4.2	4.2	4.1	3.7	3.7	...a	...	...	...
10	...	...	...	...	3.8	3.9	4.2	4.1	4.0	...	...	...	...
11	...	...	...	...	4.1	...c	4.2	4.2	4.0	4.0	3.0	...	...
12	...	...	...	...	4.0	4.2	4.3	4.2	4.0	...a	...	...	...
13	...	...	...	3.5	4.0	4.2	4.3	4.2	4.2	4.0	...	...	...
14	...	...	...	...	4.0	4.4	4.1	4.1	4.3	3.9	3.1	...	...
15	...	...	...	3.5	4.1	4.3	4.2	4.3	...a	4.0	...	...	...
16	...	...	...	...	3.9	4.3	4.2	4.4	...a	3.9	...	...	...
17	...	...	...	...	...	...a	4.3	3.9	4.1	3.8	3.0	...	...
18	...	...	...	...	4.1	4.1	...a	4.2	...a	...a	...	...	...
19	...	...	...	3.4	4.0	4.1	4.1	4.1	4.1	4.0	...	...	...
20	...	...	...	...	...	...	4.3	3.9	4.1	3.8	...	...	...
21	...	...	...	3.8	4.0	4.1	4.1	4.2	3.9	...	...	...	...
22	...	...	...	...	4.0	4.2	4.0	4.2	p4.1	4.0	...	...	...
23	...	...	...	...	4.0	4.3	4.1	4.2	4.2	3.7	...	...	...
24	...	...	...	...	3.8	4.0	4.1	4.6	4.0	3.9	...	...	...
25	...	...	...	3.7	3.9	4.1	4.0	4.0	3.9	3.8	3.3	...	...
26	...	...	...	3.5	4.0	4.0	4.2	3.8	3.9	3.8	...	...	...
27	...	...	...	3.8	4.0	4.0	4.2	4.2	4.2	4.0	3.6	...	...
28	...	...	...	...	4.0	4.0	4.1	4.1	4.0	3.8	...	...	...
29	...	...	...	...	4.0	4.0	4.1	4.1	4.0	3.8	...	...	...
30	...	...	...	3.8	4.0	4.2	4.2	4.2	4.0	3.8	...a	...	...
31	...	...	...	3.9	4.1	4.2	4.2	4.2	4.0	3.9	...	...	...
MEAN*	...	...	...	3.7	4.0	4.1	4.2	4.2	4.0	3.9	3.2	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	195	225	...	220	220	230	...	...	...
2	...	...	...	...	230	215	230	...a	...a	...	...	...	...
3	...	...	...	...	230	...a	...a	...a	...a	...	...	...	...
4	...	...	...	...	230	185	...a	...a	205	215	...	...	...
5	...	...	...	...	210	200	215	190	...	...	...	...	...
6	...	...	...	...	...	...	230	220	240	195	...	...	...
7	...	...	...	...	240	210	...a	...a	230	...	...	...	...
8	...	...	...	...	215	...h	...a	230	...	230	...	...	...
9	...	...	...	...	230	210	195	215	175	...a	...	...	...
10	...	...	...	...	200	185	235	210	230	...	...	...	...
11	...	...	...	...	230	...c	215	215	200	230	215	...	...
12	...	...	...	...	...a	...a	245	200	205	...a	...	...	...
13	...	...	...	190	...h	225	190	190	225	230	...	...	...
14	...	...	...	...	215	215	...a	...a	220	235	210	...	...
15	...	...	...	190	215	...a	230	205	...a	225	...	...	...
16	...	...	...	...	235	220	210	...a	...a	215	...	...	...
17	...	...	...	...	...	...a	230	...a	215	200	200	...	...
18	...	...	...	...	...a	215	...a	...a	...a	...a	...	...	...
19	...	...	...	180	230	175	220	220	...h	180	...	...	...
20	...	...	...	...	...	...	230	...a	205	230	...	...	...
21	...	...	...	220	220	200	p205a	210	200	...	...	...	...
22	...	...	...	...	240	p220a	200	230	p220	220	...	...	...
23	...	...	...	...	210	...h	...a	225	200	220	...	...	...
24	...	...	...	...	210	200	190	190	195	...h	...	...	...
25	...	...	...	240	240	220	200	220	215	230	...a	...	...
26	...	...	...	225	230	...a	200	180	220	220	...	...	...
27	...	...	...	205	210	210	200	180	250	225	205	...	...
28	...	...	...	...	210	210	200	220	215	220	...	...	...
29	...	...	...	...	180	185	180	200	230	215	...	...	...
30	...	...	...	240	200	185	190	190	180	180	...a	...	...
31	...	...	...	240	225	...a	200	180	200	210	...	...	...
MEAN*	...	...	...	214	219	205	210	206	213	217	208	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 202

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.5	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	...e	...
2	...	...	...e	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.6	...
3	...	...	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.7	0.6	...e	...
4	...	...	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.5	...
5	...	...	0.5	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	...
6	...	...	...e	0.6	0.6	0.6	0.6	0.6	0.5	0.6	...e	...e	...
7	...	...	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	...e	...
8	...	...	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.5	...
9	...	...	...e	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.5	...
10	...	...	0.5	0.6	0.6	0.6	0.7	0.7	0.7	p0.6c	0.6	0.5	...
11	...	...	0.7	0.6	0.7	p0.7c	0.7	0.7	0.7	0.6	0.6	0.6	...
12	...	...	0.5	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.7	...
13	...	...	0.7	0.6	0.6	0.5	0.6	0.7	0.7	0.9	0.7	0.6	...
14	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	...
15	...	...	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.7	0.7	0.6	...
16	...	...	0.7	0.6	0.5	0.6	0.7	0.7	0.7	0.6	0.6	0.5	...
17	...	...	0.6	0.5	0.7	0.6	0.7	0.7	0.7	0.5	0.6	0.6	...
18	...	...	0.6	0.6	0.6	0.6	0.8	0.6	0.7	0.6	0.5	...e	...
19	...	...	0.5	0.6	0.6	0.6	0.7	0.6	0.5	0.6	0.6	0.7	...
20	...	...	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	...
21	...	...	0.6	0.6	0.6	0.5	0.5	0.6	0.5	...e	0.7	0.6	...
22	...	...	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.6	0.5	...
23	...	...	0.7	0.7	0.6	0.5	0.7	0.6	0.6	0.6	0.7	0.6	...
24	...	...	0.8	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.6	0.7	...
25	...	...	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	...
26	...	...	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
27	...	...	0.8	0.8	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	...
28	...	...	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.6	...e	...
29	...	...	0.6	0.6	0.5	0.6	0.6	0.7	0.5	0.5	0.6	0.5	...
30	...	...	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.5	0.6	...
31	...	...	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	...
* MEAN	...	...	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.3	2.2	2.5	2.7	2.7	3.1	2.9	2.8	2.7	2.4	1.5	...
2	...	1.5	2.2	2.7	2.8	2.8	2.9	2.9	2.8	...a	2.1	...a	...
3	...	1.5	2.2	2.5	2.7	2.8	3.0	3.0	2.9	2.7	2.4	1.6	...
4	...	1.5	2.5	2.8	2.8	3.0	3.0	3.0	2.8	2.8	...a	...a	...
5	...	1.4	2.4	2.7	2.8	3.0	3.0	2.9	2.8	2.7	2.3	1.8	...
6	...	1.5	2.2	2.7	2.8	3.0	3.0	3.0	2.9	2.7	2.6	...a	...
7	...	1.0	2.1	2.6	2.8	3.0	3.0	3.0	2.9	2.8	2.5	1.8	...
8	...	1.2	2.0	3.0	3.0	2.8	3.0	3.0	2.8	2.6	2.3	1.8	...
9	...	1.5	2.0	2.5	2.8	2.8	2.8	2.6	2.9	2.5	2.3	1.8	...
10	...	1.5	2.4	2.7	2.8	2.8	2.9	2.8	2.8	p2.5c	2.3	1.7	...
11	...	1.5	2.4	2.9	2.9	p3.0c	3.0	3.2	3.0	2.8	2.2	1.6	...
12	...	1.4	2.0	2.5	2.6	2.9	2.8	2.7	2.9	...a	2.3	1.8	...
13	...	1.5	1.9	2.4	2.6	2.8	2.9	2.9	2.9	3.0	2.5	1.5	...
14	...	...a	2.2	2.5	2.8	3.1	3.2	p3.0a	2.9	2.5	...a	...a	...
15	...	...a	2.1	2.6	2.8	3.0	3.0	3.0	2.9	...a	...a	1.7	...
16	...	1.5	2.4	2.7	2.8	3.0	3.1	2.9	2.6	2.8	2.4	...a	...
17	...	1.4	2.3	2.5	2.7	2.8	3.0	2.9	2.6	2.6	2.3	1.7	...
18	...	1.5	2.1	2.5	3.0	...a	3.0	3.0	2.8	2.6	2.0	...a	...
19	...	...a	2.0	2.5	2.8	2.8	3.0	2.9	2.9	2.7	2.4	1.6	...
20	...	1.3	2.0	2.4	2.8	2.9	2.8	3.0	2.9	2.7	2.4	1.7	...
21	...	1.5	2.1	2.7	2.9	3.1	2.9	2.9	3.0	2.8	...a	1.8	...
22	...	1.5	2.1	2.6	2.8	3.0	3.1	3.0	2.9	2.7	2.3	2.0	...
23	...	1.5	2.2	2.6	2.7	2.9	3.0	3.0	2.8	2.7	2.5	...a	...
24	...	1.6	2.4	2.5	2.8	3.0	3.1	3.1	2.9	2.7	2.4	...a	...
25	...	1.5	1.9	2.4	3.0	3.0	3.0	2.9	2.8	2.8	...a	2.0	...
26	...	1.4	1.9	2.4	2.6	2.7	2.7	2.7	2.7	2.6	2.4	...a	...
27	...	1.4	2.1	2.5	2.8	2.8	2.9	3.0	2.8	2.7	2.3	1.7	...
28	...	1.5	2.1	2.5	2.6	2.9	2.8	2.8	2.7	2.5	...a	...a	...
29	...	1.4	2.1	2.4	2.7	2.8	2.8	2.8	2.5	...a	...a	1.5	...
30	...	1.6	2.2	2.4	2.7	2.9	2.9	3.0	2.7	2.5	...a	...a	...
31	...	1.3	2.1	2.5	2.5	3.0	2.9	3.0	3.0	2.8	2.4	...a	...
* MEAN	...	1.4	2.2	2.6	2.8	2.9	3.0	2.9	2.8	2.7	2.4	1.7	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 203

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — AUGUST 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.0	3.0	3.2	3.2	3.5	3.5	2.6	3.6	4.9	5.3	5.0	5.5	5.5	7.2	5.8	6.8	5.1	5.3	3.8	2.8	2.5	2.8	3.1	2.8	4.2
2	2.9	3.0	3.1	3.3	3.6	3.0	2.2	3.4	5.0	5.4	5.4	5.8	5.6	5.8	5.4	5.6	6.5	5.2	3.6	3.0	2.8	3.0	3.2	3.3	4.1
3	3.0	3.1	3.4	3.4	3.1	3.1	2.4	4.0	5.1	5.2	7.0	7.3	6.1	7.1	6.0	6.8	5.4	4.9	4.4	3.8	3.3	3.7	3.8	3.5	4.5
4	3.4	3.5	3.6	3.9	4.0	3.5	3.2	4.0	4.8	5.9	6.0	6.4	6.3	5.2	5.8	6.1	6.0	6.2	5.0	4.1	3.0	3.2	3.3	3.6	4.6
5	3.7	3.9	p3.8	4.0	4.0	3.3	3.0	3.8	4.6	4.9	5.8	5.3	5.5	6.2	6.4	5.3	6.2	5.1	4.3	4.0	3.4	3.3	3.8	4.0	4.5
6	3.9	4.5	4.5	4.3	4.3	4.0	3.9	4.5	5.3	5.4	5.5	5.6	6.3	5.8	5.8	p5.5c	p6.2	5.0	5.5	3.4	3.2	3.4	4.0	3.1	4.7
7	4.0	4.0	3.9	4.5	4.3	3.1	3.4	4.2	5.6	5.4	5.7	6.1	6.8	7.3	6.3	5.8	5.7	6.2	4.8	4.5	4.3	3.6	4.0	3.9	4.9
8	3.8	4.3	4.4	4.3	4.7	3.6	3.5	4.2	5.3	4.9	6.2	6.5	5.6	5.6	6.7	6.2	5.3	5.3	4.6	4.1	2.7	3.0	3.1	3.5	4.6
9	3.7	3.8	3.7	3.8	3.8	4.2	3.5	4.2	5.1	5.3	5.6	5.8	5.9	5.4	6.0	6.5	5.4	5.1	4.4	3.9	3.0	3.3	3.5	3.8	4.5
10	3.8	3.9	3.0	3.4	3.6	2.9	2.6	4.0	5.5	6.3	5.9	6.1	6.0	6.1	5.7	5.5	5.5	5.4	4.1	3.4	2.6	2.8	3.3	3.3	4.6
11	2.8	3.0	3.0	2.9	2.2	2.7	2.1	4.2	5.4	5.8	5.7	5.6	7.5	7.5	7.1	6.5	6.4	5.2	4.0	2.8	2.7	3.2	3.5	3.4	4.4
12	3.4	3.6	3.5	2.7	4.0	3.3	3.8	4.1	4.9	5.1	5.3	5.9	5.4	6.1	5.6	5.7	5.7	5.3	4.6	2.8	2.5	2.2	2.3	2.4	4.2
13	2.5	2.5	2.7	2.5	2.6	2.8	p3.5f	4.2	4.8	5.6	5.5	5.5	6.0	5.7	5.9	5.6	5.5	5.3	4.3	3.3	2.6	3.0	3.2	2.8	4.1
14	2.9	2.8	2.8	3.0	2.7	2.9	3.2	4.1	4.9	6.4	5.6	6.4	6.0	6.3	5.8	5.5	5.5	5.2	4.5	4.0	3.6	3.3	3.0	3.0	4.3
15	3.6	3.7	4.0	4.0	3.9	3.3	3.3	3.9	4.8	5.2	5.2	5.7	6.5	6.3	5.7	p6.0	5.3	5.6	3.6	2.9	2.6	2.7	2.3	p2.4f	4.3
16	2.4	2.5	2.8	3.0	2.8	2.9	2.8	4.1	5.1	5.8	6.0	5.8	7.0	6.5	6.7	6.2	6.0	4.1	3.9	3.3	3.5	3.6	4.0	3.8	4.4
17	3.5	3.6	3.5	p3.5a	3.5	3.4	3.2	3.3	4.4	4.7	4.7	5.3	5.1	5.9	5.7	6.0	5.5	4.9	3.9	3.0	3.1	3.6	3.6	3.2	4.2
18	3.5	3.0	3.3	3.3	3.5	3.7	3.0	4.1	5.0	5.2	5.0	6.1	5.7	6.0	5.5	5.8	5.1	5.5	4.1	3.5	2.7	3.2	3.0	2.3	4.2
19	2.8	2.7	2.9	2.9	2.3	2.2	1.9	3.2	4.0	5.0	...	5.3	5.5	5.8	6.4	5.7	4.8	4.8	4.8	3.1	2.9	2.8	2.6	2.4	...
20	2.5	2.8	3.2	3.4	3.0	2.8	...f	3.5	4.2	4.3	4.7	5.2	5.4	5.3	5.1	p5.5	5.0	4.4	4.0	3.0	2.5	3.0	3.2	2.9	...
21	2.9	3.2	3.0	3.1	2.7	p3.1	2.9	3.7	4.5	4.8	5.6	5.4	6.7	6.3	6.4	5.9	5.5	5.0	4.8	3.2	2.6	3.0	3.3	3.3	4.2
22	3.5	3.2	3.4	3.4	2.8	2.9	2.8	4.0	5.0	5.7	5.8	6.2	5.6	6.3	5.5	5.8	5.9	5.4	4.3	3.9	3.4	3.6	3.0	3.2	4.4
23	3.4	3.5	3.6	3.6	3.3	3.2	2.7	...c	...c	...c	...c	...c	...c	...c	5.9	6.7	5.6	4.8	4.1	4.2	4.1	3.3	3.3	3.2	...
24	3.0	3.1	3.3	2.8	2.7	2.2	2.2	4.0	4.6	6.3	5.8	...c	6.2	6.0	5.5	5.4	5.2	4.8	4.2	3.4	3.0	3.3	3.2	3.2	...
25	3.3	3.1	3.3	3.4	2.2	2.5	2.8	4.0	4.3	5.3	5.6	6.0	6.5	6.3	7.2	7.0	6.0	5.3	4.5	3.5	2.9	2.9	3.2	3.5	4.4
26	3.7	3.0	3.0	p2.7f	2.4	2.2	1.9	3.5	4.1	4.4	4.7	4.8	5.3	5.6	5.2	5.6	5.5	4.7	4.0	3.4	2.6	3.0	2.9	2.9	3.8
27	3.1	3.4	3.6	2.9	2.5	2.8	p2.5f	3.8	4.0	4.5	4.8	4.8	5.3	5.4	5.1	5.1	5.0	4.6	4.0	3.5	3.2	3.2	3.6	3.4	3.9
28	3.5	3.3	3.2	3.3	3.2	3.0	3.1	4.1	5.0	5.3	5.0	5.2	5.6	5.6	5.9	5.5	5.1	5.5	4.4	3.6	2.8	3.4	3.5	3.5	4.2
29	3.5	3.0	3.2	3.6	3.5	2.4	3.0	4.3	4.9	4.6	5.7	5.7	5.5	6.1	5.5	5.5	5.6	5.1	4.0	3.7	3.6	3.8	3.6	3.5	4.3
30	3.5	3.6	3.6	3.3	3.3	3.3	3.2	4.6	5.5	5.4	6.2	5.2	5.6	6.0	5.8	6.0	5.3	p5.0c	4.3	4.4	3.9	4.2	4.2	4.1	4.6
31	3.7	3.4	3.6	4.1	3.0	2.9	3.0	4.4	...c	...c	...c	6.0	6.3	6.8	7.8	6.8	6.5	5.3	5.5	4.1	3.6	3.8	3.9	4.1	...
MEAN*	3.3	3.3	3.4	3.4	3.3	3.0	2.9	4.0	4.9	5.3	5.5	5.7	5.9	6.1	6.0	5.9	5.6	5.2	4.3	3.5	3.1	3.2	3.3	3.3	4.3

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 204

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — AUGUST 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	p240a	245	240	235	200	210	210	235	250	270	315	325	260	275	260	275	230	200	p210a	225	260	245	215	244
2	250	230	245	240	225	180	230	220	220	250	250	265	280	300	275	275	250	220	205	220	240	210	230	240	240
3	270	220	210	205	205	200	190	215	230	280	265	245	260	270	280	250	235	225	220	205	230	230	205	240	233
4	240	230	225	245	205	200	205	210	230	285	260	250	300	230	320	250	250	210	215	210	210	p225a	240	250	237
5	220	225	p250	230	220	195	215	200	225	240	280	310	285	290	260	195	225	200	210	200	210	p230a	250	240	234
6	240	220	215	215	205	200	p200a	200	230	230	280	290	330	275	250	p225c	p230	225	210	180	235	225	230	260	233
7	235	210	240	225	205	200	200	230	245	275	290	285	290	255	260	260	250	230	210	240	205	235	235	220	239
8	210	220	235	230	205	230	210	210	220	225	250	260	250	300	265	250	235	215	215	200	210	225	220	240	230
9	245	230	230	215	210	210	220	225	230	240	270	265	325	240	300	250	210	220	210	210	230	p240a	255	235	238
10	260	240	220	220	230	235	250	240	225	240	250	270	270	270	275	290	230	230	205	200	...a	275	250	230	...
11	p240a	250	230	...a	300	225	230	230	220	240	280	300	270	270	270	280	230	235	205	220	...a	270	260	265	...
12	255	215	230	235	...a	...a	210	225	230	240	275	270	300	350	280	270	200	230	210	200	...a	245	255	260	...
13	245	240	235	240	250	245	...a	220	200	255	275	285	265	300	270	270	220	230	220	220	225	245	220	235	...
14	250	215	220	225	215	220	205	200	235	235	320	250	260	265	235	290	230	220	205	220	220	200	220	230	233
15	240	240	230	225	...a	225	200	220	240	255	285	340	260	265	290	255	245	235	190	235	220	235	200	...a	...
16	255	235	250	245	220	230	230	230	230	270	285	295	290	270	295	270	220	220	215	240	245	250	255	230	249
17	230	...a	230	...a	230	260	280	250	310	350	350	300	380	300	310	275	250	225	220	230	300	235	220	260	...
18	235	...a	270	230	245	220	230	220	275	285	425	270	290	285	325	265	220	235	215	225	...a	230	245	...a	...
19	250	275	...a	...a	245	275	300	240	245	275	...	330	325	315	280	270	250	250	220	220	235	...a	...a	260	...
20	265	...a	275	...a	250	210	210	230	230	210	380	330	325	300	325	p260	270	220	245	230	250	240	210	265	...
21	260	230	260	250	250	235	240	225	300	290	285	310	265	260	270	255	240	230	220	200	240	250	235	235	251
22	220	240	220	205	200	240	230	250	285	265	285	285	290	270	320	280	255	230	230	p230a	225	215	240	230	248
23	235	230	230	205	...a	240	210	...c	...c	...c	...c	...c	...c	...c	345	265	250	245	220	225	225	225	250	250	...
24	260	260	215	235	255	220	290	260	230	280	315	...c	335	300	295	290	260	235	220	220	225	...a	260	240	...
25	240	...a	225	230	220	245	220	225	260	275	300	290	305	265	300	285	255	240	225	220	205	255	255	240	...
26	250	245	265	270	p260a	250	235	250	210	210	345	450	340	330	345	310	270	230	220	235	240	235	240	270	271
27	255	230	225	215	235	245	250	230	235	415	390	420	320	320	330	330	290	240	230	225	230	250	230	255	275
28	250	220	240	230	220	235	235	240	275	265	330	320	335	305	305	290	210	230	220	200	245	230	235	235	254
29	230	220	250	220	210	200	225	240	250	175	300	305	320	295	290	270	275	200	210	230	235	...a	...a	220	...
30	...a	240	215	215	210	215	215	230	270	270	290	340	315	325	285	270	215	...c	205	240	250	260	260	225	...
31	230	245	250	200	180	250	235	220	...c	...c	...c	310	315	310	270	270	250	220	220	210	250	270	255	250	...
MEAN*	243	233	236	227	226	224	227	226	242	261	299	302	301	286	290	269	242	227	215	218	232	239	238	242	248

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 205

AUGUST 1942 — AUGUST 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.1	4.3	4.4	4.2	4.1	3.8	...	...	...
2	...	...	...	3.8	4.1	4.2	4.2	4.3	4.1	4.0	3.6	...	...
3	...	...	...	4.1	4.2	4.3	4.3	4.0	4.1	4.0	3.2	...	...
4	...	...	...	4.1	4.1	4.2	4.2	4.2	4.0	3.8	...	...	...
5	...	...	...	...	4.1	4.5	4.3	4.3	3.8	...	...	...	...
6	...	...	...	...	4.1	4.2	4.3	4.2	4.1	...	...	...	...
7	...	...	...	4.0	4.1	4.2	4.2	4.1	4.0	3.7	...	...	...
8	...	...	...	3.2	4.0	4.3	4.2	4.3	4.1	4.0	...	...	...
9	...	...	...	...	4.2	4.3	4.3	4.2	4.2	...	...	...	...
10	...	...	...	3.9	4.1	4.2	4.2	4.1	3.8	3.8	...	...	...
11	...	...	...	...	4.0	4.2	4.2	4.2	4.2	3.9	...	...	...
12	...	...	3.0	3.3	4.0	4.2	4.2	4.4	4.1	3.9	...	...	...
13	...	...	...	3.9	4.1	4.2	4.2	4.2	4.1	3.8	...	...	...
14	...	...	2.8	4.0	4.3	4.3	4.3	4.3	4.2	3.8	3.6	...	...
15	...	...	...	3.9	4.2	4.2	4.3	4.1	4.2	4.0	3.5	...	...
16	...	...	...	4.0	4.1	4.1	4.2	4.3	4.1	3.9	...	...	...
17	...	...	3.4	3.8	3.9	4.1	4.1	4.1	4.0	3.8	3.4	...	...
18	...	...	3.1	3.9	4.3	4.1	4.2	4.1	4.1	3.9	...	...	...
19	...	...	...	p3.8	4.4	4.0	4.2	4.2	4.0	3.9	3.3	...	...
20	...	...	...	...	4.1	4.1	4.1	4.1	4.1	3.9	3.5	...	...
21	...	...	3.6	3.9	4.2	4.3	4.2	4.2	4.0	4.0	3.4	...	...
22	...	...	3.7	4.0	4.2	4.1	4.3	4.3	4.2	4.0	3.6	...	...
23	...	...	...c	...	...	...	...	...c	4.2	3.9	3.6	...	...
24	...	...	...	3.9	4.1	...c	4.2	4.1	4.1	4.0	3.2	...	...
25	...	...	3.2	4.0	4.3	4.2	4.3	4.3	4.3	4.1	3.5	...	...
26	...	...	...	...	4.1	4.2	4.2	4.2	4.2	4.0	3.7	...	...
27	...	...	...	4.0	4.0	4.2	4.2	4.2	4.2	4.1	3.7	...	...
28	...	...	3.7	4.0	4.2	4.4	4.3	4.3	4.2	4.2	...	...	...
29	...	...	3.7	...	4.2	4.3	4.4	4.3	4.3	4.2	3.8	...	...
30	...	...	3.6	4.0	4.3	4.4	4.4	4.4	4.3	4.1	...	...	...
31	...	...	...c	...c	...c	4.4	4.4	4.4	4.3	4.1	3.7	...	...
*MEAN	...	...	3.4	3.9	4.1	4.2	4.2	4.2	4.1	4.0	3.5	...	...

MINIMUM VIRTUAL HEIGHT OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	210	p210h	210	210	190	230	...	...	...
2	...	...	...	220	230	230	190	210	200	200	215	...	...
3	...	...	...	230	235	235	210	185	190	185	215	...	...
4	...	...	...	235	240	225	220	200	185	190	...	...	...
5	...	...	...	...	250	215	225	235	185	...	...	...	...
6	...	...	...	...	185	235	200	220	225	...	...	...	...
7	...	...	...	225	205	200	200	215	215	200	...	...	...
8	...	...	...	185	230	220	215	215	200	230	...	...	...
9	...	...	...	...	230	220	210	200	170	...	...	...	...
10	...	...	...	235	210	200	195	195	160	185	...	...	...
11	...	...	...	...	220	210	220	215	230	200	...	...	...
12	...	...	190	180	200	220	190	220	215	200	...	...	...
13	...	...	...	200	195	220	200	...g	220	210	...	...	...
14	...	...	175	250	200	200	190	200	200	200	220	...	...
15	...	...	...	240	240	220	230	...a	215	220	210	...	...
16	...	...	...	225	220	210	200	215	245	230	...	...	...
17	...	...	220	210	215	...a	205	210	...a	...a	...g	...	...
18	...	...	230	230	210	200	210	190	190	215	...	...	...
19	...	...	...	p230	215	215	245	230	200	200	210	...	...
20	...	...	...	...	205	200	230	225	215	215	210	...	...
21	...	...	215	215	220	190	200	185	200	215	220	...	...
22	...	...	240	230	200	210	200	190	185	200	225	...	...
23	...	...	...c	...c	...c	...c	...c	...c	200	210	215	...	...
24	...	...	...	235	235	...c	210	230	225	220	200	...	...
25	...	...	220	210	220	210	195	...a	205	235	210	...	...
26	...	...	...	210	210	215	210	220	200	200	210	...	...
27	...	...	...	225	230	210	200	200	220	235	225	...	...
28	...	...	225	210	205	200	200	200	190	205	...	...	...
29	...	...	205	...	...a	...a	220	220	225	215	205	...	...
30	...	...	195	190	180	200	215	160	230	215	...	...	...
31	...	...	...c	...c	...c	220	215	220	...a	...a	205	...	...
*MEAN	...	...	212	219	216	213	209	209	205	210	213	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 206

AUGUST 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.8	...
2	...	...	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.5	...
3	...	...	0.8	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.5	...
4	...	...	0.5	0.6	0.7	0.7	0.6	0.5	0.6	0.7	0.6	0.5	...
5	...	...	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	...
6	...	...	0.5	0.6	0.6	0.6	0.7	0.6	0.7	p0.7	p0.6	...e	...
7	...	...	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	...
8	...	...	...e	0.6	0.5	0.7	0.6	0.6	0.6	0.7	0.6	...e	...
9	...	...	...e	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.6	...e	...
10	...	...	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	...
11	...	...	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	...
12	...	...	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	...
13	...	...	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	...
14	...	...	0.6	0.6	0.7	0.6	0.5	0.6	0.5	0.6	0.6	0.6	...
15	...	...	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	...e	...
16	...	...	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.5	0.5	...
17	...	...	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	...
18	...	...	0.6	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.5	...
19	...	...	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	...
20	...	...	0.6	0.6	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.6	...
21	...	...	0.5	0.5	0.7	0.7	0.7	0.8	0.7	0.8	0.6	0.6	...
22	...	...	0.5	0.6	0.7	0.5	0.7	0.6	0.5	0.6	0.5	...e	...
23	...	...	...c	...c	...c	...c	...c	...c	0.8	0.7	0.7	0.7	...
24	...	...	0.7	0.8	0.8	...c	0.8	0.7	0.6	0.6	0.6	0.5	...
25	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
26	...	...	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.6	...
27	...	...	0.7	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.7	0.7	...
28	...	...	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	...
29	...	...	0.6	0.6	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	...
30	...	...	0.6	0.7	0.8	0.8	0.8	0.7	0.8	0.7	0.6	...c	...
31	...	...	...c	...c	...c	0.6	0.7	0.7	0.7	0.7	0.7	0.7	...
MEAN*	...	...	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.5	2.1	2.5	2.9	2.9	3.1	3.0	2.9	2.7	2.4	1.8	...
2	...	1.7	2.2	2.7	2.8	2.9	2.9	p3.0a	3.0	p2.8a	2.5	1.7	...
3	...	1.7	2.4	2.6	2.8	3.0	3.0	2.9	3.0	2.9	2.5	2.0	...
4	...	1.7	2.4	3.0	3.0	2.9	3.0	2.9	3.0	p2.8a	2.7	1.9	...
5	...	1.4	2.1	2.5	2.8	3.0	3.0	3.0	3.1	2.8	2.4	...a	...
6	...	1.8	2.5	2.7	2.9	3.0	3.1	3.1	3.0	p2.6c	p2.5	2.0	...
7	...	1.8	2.1	2.6	2.8	3.0	3.1	3.1	3.0	2.7	2.4	1.9	...
8	...	1.5	2.4	2.5	2.8	3.0	3.1	3.0	2.9	2.8	2.4	2.0	...
9	...	1.9	2.7	2.6	2.8	3.0	3.1	3.1	3.1	2.8	2.5	...a	...
10	...	1.7	2.5	2.6	2.6	2.6	3.1	2.8	3.0	2.5	2.4	1.7	...
11	...	1.7	2.2	2.6	2.8	3.0	3.0	3.0	2.8	2.8	2.5	1.9	...
12	...	1.5	2.2	2.6	2.8	3.0	3.0	2.8	2.9	2.7	2.4	1.8	...
13	...	...a	2.2	2.5	2.8	3.0	3.0	3.0	2.9	2.5	2.5	2.0	...
14	...	...	2.2	2.6	2.8	3.0	3.0	3.1	3.0	2.8	2.5	1.9	...
15	...	1.2	2.1	2.6	2.8	3.0	3.0	3.0	3.0	2.8	2.5	2.0	...
16	...	1.6	2.5	2.7	2.9	3.0	3.0	3.0	3.0	2.6	2.3	1.9	...
17	...	1.7	2.2	2.6	2.8	3.0	3.0	3.0	2.8	2.7	2.1	1.8	...
18	...	1.7	2.1	2.5	2.6	3.0	2.8	...a	...a	...a	...a	2.1	...
19	...	1.7	2.4	2.6	2.8	2.8	3.0	2.8	3.0	2.8	2.5	2.0	...
20	...	1.7	2.5	2.6	2.8	3.0	3.0	2.9	2.8	2.8	2.5	1.9	...
21	...	1.9	2.3	2.7	2.8	3.0	3.1	3.0	3.0	2.7	2.5	1.9	...
22	...	1.7	2.4	2.7	2.8	3.0	3.1	3.2	3.0	2.8	2.5	1.9	...
23	...	...c	...c	...c	...c	...c	...c	...c	3.0	2.8	2.5	1.8	...
24	...	1.8	2.5	2.6	2.8	...c	3.1	3.1	3.0	2.7	2.5	1.9	...
25	...	1.8	2.2	2.7	2.9	3.0	2.8	...a	3.0	2.9	2.6	1.9	...
26	...	1.4	2.1	2.7	2.9	3.1	3.1	3.2	3.1	3.0	2.5	2.0	...
27	...	1.9	2.6	2.9	3.0	3.1	3.2	3.2	2.9	2.9	2.5	2.0	...
28	...	1.9	2.4	2.8	2.9	3.2	3.1	3.1	3.1	2.9	2.6	2.2	...
29	...	1.8	2.4	2.8	2.9	3.1	3.3	3.3	3.1	3.0	2.5	2.0	...
30	...	1.8	2.5	2.9	3.0	3.1	3.2	3.1	3.0	3.0	2.4	...c	...
31	...	2.1	...c	...c	...c	3.1	3.3	3.2	3.1	2.8	...a	2.0	...
MEAN*	...	1.7	2.3	2.7	2.9	3.0	3.0	3.0	3.0	2.9	2.5	1.9	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 207

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — SEPTEMBER 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.0	4.0	3.8	3.3	2.4	2.5	2.7	4.2	5.2	5.5	...c	...c	...c	...c	...c	...c	5.3	5.3	4.6	3.9	3.6	3.3	3.3	3.6	...
2	3.2	3.8	4.0	3.1	3.2	2.8	2.9	4.3	5.0	5.7	6.0	6.1	7.2	6.1	5.6	...c	6.2	6.7	5.2	4.6	3.0	3.1	3.2	3.4	...
3	3.2	3.4	3.6	3.5	2.5	2.9	3.1	4.0	5.5	6.1	7.5	6.6	6.7	6.0	6.2	...c	6.4	5.9	5.4	4.6	3.7	3.4	3.4	3.6	...
4	...f	...f	2.7	...f	...f	3.0	2.9	4.5	5.5	5.5	6.2	5.8	6.0	7.4	6.0	6.2	5.6	5.5	4.8	3.8	3.0	3.3	3.3	3.3	...
5	3.0	3.0	3.0	2.8	2.7	2.9	3.2	4.8	5.1	5.7	5.3	5.7	6.6	7.5	7.3	6.9	6.6	5.6	4.2	4.2	3.3	3.3	3.4	3.5	4.6
6	3.5	3.5	3.3	3.1	2.8	2.5	2.9	5.0	5.9	6.2	6.8	6.5	6.6	7.5	6.8	6.6	6.8	5.8	5.0	4.8	...f	4.2	3.9	3.5	...
7	3.7	3.5	4.0	3.7	2.8	2.5	3.3	4.6	6.0	6.7	p7.5	...c	6.1	6.8	6.6	5.6	6.0	5.9	4.8	3.7	3.5	3.3	3.2	3.3	...
8	3.2	3.5	3.6	3.4	3.3	3.0	3.3	4.7	5.6	6.3	7.0	7.4	6.7	6.7	6.2	6.0	5.7	5.3	5.2	4.5	3.7	3.5	3.5	3.3	4.8
9	3.1	3.3	p3.2f	3.2	p3.0f	2.4	2.6	4.6	5.3	5.3	5.7	6.3	6.3	5.5	5.7	5.5	5.0	5.0	3.9	3.7	3.8	3.7	3.8	3.8	4.3
10	3.9	3.4	2.8	2.4	2.9	3.0	3.3	4.8	4.9	5.5	5.4	5.5	5.8	6.6	6.6	6.0	5.4	5.0	4.5	3.8	3.6	3.7	4.0	3.5	4.4
11	3.3	3.5	2.9	2.7	3.0	2.9	3.0	4.7	5.5	6.2	5.5	6.7	6.7	6.6	6.0	6.0	5.7	5.5	4.5	3.5	3.5	3.9	3.7	3.7	4.6
12	3.6	3.5	2.5	2.6	2.6	2.5	2.6	3.7	4.2	4.8	5.2	6.0	6.0	5.1	4.5	4.4	4.6	4.3	4.4	4.6	4.4	4.2	4.2	3.7	4.1
13	3.5	2.8	2.8	2.8	2.9	2.8	3.0	4.5	5.5	5.5	6.5	6.7	7.2	6.2	5.8	6.4	6.0	5.3	4.1	4.2	4.4	4.0	p3.9a	3.8	4.6
14	3.6	3.5	2.9	2.3	2.4	2.1	3.0	4.2	5.8	6.6	7.6	9.0	8.3	7.9	6.7	5.9	5.8	4.9	5.0	4.2	4.1	3.7	3.6	3.6	4.9
15	3.4	3.4	2.9	2.6	2.2	2.3	3.0	5.8	5.2	6.8	6.8	7.3	7.3	8.4	3.1	7.9	6.7	5.8	4.2	3.6	3.3	3.1	3.0	p3.1f	4.8
16	3.3	p3.1f	2.9	1.9	...f	...f	2.8	4.6	5.3	6.0	6.5	7.0	7.2	7.8	6.5	6.6	5.9	5.5	4.0	3.3	3.3	3.4	3.3	3.1	...
17	3.0	3.2	2.9	2.5	2.4	2.7	3.3	5.0	5.8	5.1	6.5	7.4	7.9	6.7	6.9	6.0	6.2	6.0	4.4	3.8	3.6	3.2	3.2	3.2	4.6
18	3.4	3.2	2.6	2.5	2.7	2.2	2.9	3.6	4.1	4.2	4.8	5.1	6.0	5.7	5.0	4.9	5.0	4.6	4.0	3.3	3.3	3.3	2.9	2.8	3.8
19	2.8	2.7	2.6	2.6	2.5	2.2	3.1	4.2	4.9	4.9	5.5	5.6	6.9	7.6	6.7	6.5	5.6	5.4	4.7	4.6	3.6	3.5	3.2	3.1	4.4
20	3.3	3.1	3.0	2.8	2.8	2.9	3.0	4.3	4.9	5.4	5.3	5.4	5.5	5.5	5.2	5.3	5.1	5.2	4.5	4.6	4.5	3.9	3.6	3.6	4.3
21	3.6	3.3	2.8	2.3	2.6	2.7	3.4	4.5	4.8	5.0	5.7	5.8	6.4	6.7	7.1	6.1	5.2	5.0	4.8	4.0	3.6	3.7	3.6	3.4	4.4
22	p3.2f	3.0	2.8	2.5	3.0	3.1	3.7	4.5	5.5	6.5	5.5	7.0	7.4	7.4	6.8	6.8	6.6	5.6	5.0	4.2	4.3	3.7	3.6	3.8	4.8
23	3.6	3.5	3.0	2.9	2.9	3.0	3.3	4.2	4.5	4.8	5.2	6.0	6.2	5.8	6.0	5.6	5.5	5.3	4.7	3.8	3.5	3.4	3.5	3.5	4.3
24	3.3	3.0	3.0	3.1	3.0	2.8	3.3	4.2	5.0	5.5	6.0	6.7	7.4	6.3	6.1	5.7	5.5	5.2	5.0	4.7	4.3	4.1	4.0	3.5	4.6
25	3.0	2.9	3.0	2.7	2.6	2.6	3.4	4.6	5.2	5.6	6.6	6.5	6.6	6.5	6.1	6.0	5.5	5.2	4.7	4.4	4.1	4.0	3.9	3.4	4.6
26	3.0	3.0	3.0	3.0	2.9	3.0	3.8	4.7	5.0	6.0	5.9	6.2	7.4	7.3	6.4	6.1	6.4	6.0	5.2	5.0	4.6	4.5	4.3	4.0	4.9
27	3.8	3.9	4.1	4.1	3.2	3.2	3.7	4.4	5.2	6.0	6.2	6.3	6.6	6.5	6.0	5.9	5.8	6.0	5.4	5.0	4.8	4.5	4.3	4.2	5.0
28	4.3	3.8	4.0	3.3	3.3	3.4	3.8	5.2	6.3	6.8	7.8	7.6	7.3	7.0	6.2	5.8	5.9	5.6	5.3	5.1	5.0	4.7	4.6	4.6	5.3
29	4.3	4.2	3.8	3.5	3.6	3.8	4.2	5.2	6.0	6.3	6.4	7.0	7.2	7.0	6.7	6.5	6.1	5.8	5.6	5.7	4.7	4.4	4.4	4.3	5.3
30	4.1	4.3	4.2	4.1	3.6	3.4	4.2	4.8	5.5	5.9	6.4	7.3	7.5	7.4	7.3	6.5	6.1	6.0	6.1	5.8	5.4	5.0	4.9	4.5	5.4
31																									
MEAN*	3.5	3.4	3.2	2.9	2.8	2.8	3.2	4.6	5.3	5.8	6.2	6.5	6.8	6.7	6.3	6.1	5.8	5.5	4.8	4.3	3.9	3.8	3.7	3.6	4.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 208

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1942 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — SEPTEMBER 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	240	240	220	215	210	250	255	...c	290	300	...c	...c	...c	...c	...c	...c	260	235	215	215	220	...a	255	230	...
2	250	245	220	225	250	250	270	235	280	275	300	300	260	270	280	...c	290	225	210	210	240	235	245	245	...
3	...a	250	235	210	185	245	245	225	315	290	240	280	280	280	285	...c	250	235	220	210	215	225	220	220	...
4	240	215	220	245	...a	240	235	235	265	270	265	295	275	260	290	250	260	225	210	...a	240	240	220	230	...
5	230	230	215	210	250	260	245	230	270	260	290	280	260	270	280	260	240	230	200	235	...a	275	280	230	...
6	225	230	225	210	200	270	250	230	270	275	245	260	295	265	270	280	250	230	230	225	220	240	250	255	246
7	225	250	220	220	...c	...a	225	230	280	270	p285	...c	285	270	265	265	250	230	210	210	230	235	250	250	...
8	240	225	240	210	220	200	240	250	275	295	290	265	290	270	280	270	265	230	230	210	240	240	255	220	248
9	235	230	210	210	...a	250	240	225	275	300	310	280	275	300	280	260	210	240	225	...a	230	250	...a	...a	...
10	...a	190	190	200	240	230	235	230	220	250	300	310	310	300	265	255	265	235	...a	...a	...a	250	235	230	...
11	250	220	195	230	235	215	245	225	270	250	330	280	260	265	280	275	265	230	210	235	260	255	255	245	249
12	235	205	210	245	270	280	230	400	460	450	420	340	320	370	420	400	365	235	260	235	240	250	230	240	307
13	215	230	230	255	...a	...a	...a	250	290	290	275	285	255	265	310	280	255	230	230	300	255	230	...a	...a	...
14	...a	270	220	220	265	245	240	240	270	300	310	270	290	245	270	270	245	230	220	240	250	270	265	270	...
15	250	240	220	205	265	260	265	240	310	275	275	290	305	280	295	260	240	230	210	225	270	215	300	...f	...
16	235	...f	...f	...f	260	...f	245	235	290	290	300	280	300	280	285	285	255	230	215	270	270	265	265	280	...
17	250	235	210	200	255	250	250	250	270	275	320	290	275	290	280	285	280	230	210	260	255	235	295	275	259
18	270	290	230	270	250	270	250	300	400	520	370	355	320	300	350	320	290	245	230	250	255	255	270	270	297
19	265	265	215	240	245	220	245	240	325	370	375	370	320	295	295	275	275	240	230	250	215	240	265	260	272
20	235	230	220	235	235	240	250	310	305	300	335	330	320	310	315	285	290	245	235	230	240	240	255	280	270
21	270	250	230	295	265	265	255	270	320	315	330	325	315	310	270	270	270	240	235	255	225	245	280	220	272
22	250	230	270	230	245	255	230	235	280	255	350	280	290	265	275	285	250	235	220	225	235	245	260	260	256
23	245	215	230	210	260	250	255	295	330	385	355	315	290	320	300	285	280	250	225	210	255	240	260	235	271
24	220	250	240	220	220	240	250	230	310	330	320	320	270	300	305	290	280	230	230	220	230	245	220	215	258
25	220	245	235	230	240	245	245	235	300	320	270	295	290	295	290	290	270	270	225	225	240	240	230	215	257
26	230	225	220	210	250	220	230	225	295	290	310	305	285	270	275	285	260	250	220	225	240	255	230	235	252
27	235	230	225	210	210	260	230	220	320	295	295	300	300	285	305	295	285	245	230	220	240	235	240	245	256
28	225	225	225	200	240	250	245	315	270	285	270	270	280	280	280	290	285	235	250	225	235	240	245	235	254
29	215	220	220	215	245	245	240	280	270	265	300	290	270	285	290	285	265	250	230	215	215	230	230	235	250
30	260	250	235	220	200	225	235	240	280	300	310	290	290	285	280	285	280	255	235	220	225	220	235	230	254
31																									
MEAN*	239	236	223	224	239	246	246	253	297	305	308	298	289	286	292	283	267	237	224	231	239	243	251	243	258

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 209

SEPTEMBER 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1942

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	3.8	4.1	...c	...c	...c	...c	...c	...c	3.9	...	...
2	...	...	3.7	4.1	4.3	4.3	4.4	4.4	4.2	...c	3.9	...	...
3	...	...	4.1	4.2	4.3	4.3	4.4	4.3	4.4	...c	3.8	...	...
4	...	...	3.8	4.1	4.3	4.4	4.3	4.3	4.2	4.1	3.7	...	...
5	...	...	3.7	4.1	4.3	4.3	4.2	4.4	4.2	4.0	3.7	...	...
6	...	...	3.8	4.2	4.3	4.3	4.7	4.4	4.4	4.1	3.6	...	...
7	...	...	3.5	4.2	p4.1c	...c	4.5	4.4	4.2	4.0	...	...	...
8	...	...	3.9	4.1	4.2	p4.4	4.3	4.3	4.2	4.0	3.7	...	...
9	...	...	3.8	4.2	4.2	4.3	4.3	4.3	4.3	4.0	...	...	...
10	...	...	...	4.1	4.2	4.3	4.3	4.2	4.2	4.0	...a	...	...
11	...	...	3.8	4.1	4.2	4.3	4.3	4.3	4.2	4.0	3.6	...	...
12	...	...	3.6	3.9	3.9	4.0	4.0	4.0	4.0	3.9	3.7	...	...
13	...	...	3.9	4.1	4.4	4.4	4.4	4.4	4.3	4.0	3.7	...	...
14	...	...	3.9	4.0	4.3	4.4	4.3	4.3	4.2	4.1	3.6	...	...
15	...	...	...	4.2	4.4	4.4	4.5	4.4	4.3	4.2	3.7	...	...
16	...	...	4.0	4.3	4.3	4.4	4.4	4.3	4.3	4.2	3.8	...	...
17	...	...	4.0	4.0	4.3	4.4	4.3	4.3	4.2	4.1	3.8	...	...
18	...	...	3.5	3.9	4.0	4.1	4.2	4.2	4.1	4.0	3.7	...	...
19	...	...	3.9	4.2	4.3	4.1	4.2	4.2	4.2	4.0	3.8	...	...
20	...	...	3.9	4.1	4.2	4.2	4.2	4.2	4.1	4.1	3.8	...	...
21	...	...	3.9	4.1	4.3	4.3	4.3	4.3	4.2	4.1	3.5	...	...
22	...	...	3.9	4.2	4.4	4.4	4.4	4.4	4.4	4.3	3.7	...	...
23	...	...	4.0	4.1	4.2	4.3	4.3	4.4	4.2	4.2	3.9	...	...
24	...	...	4.0	4.2	4.3	4.3	4.4	4.4	4.3	4.2	3.9	...	...
25	...	...	4.0	4.2	4.3	4.4	4.4	4.4	4.3	4.1	3.8	...	...
26	...	...	4.1	4.3	4.3	4.4	4.4	4.3	4.4	4.2	3.8	...	...
27	...	...	4.0	4.2	4.3	4.3	4.4	4.3	4.3	4.2	4.0	...	...
28	...	...	4.0	4.2	4.3	4.4	4.5	4.5	4.3	4.3	4.0	...	...
29	...	...	4.0	4.3	4.4	4.4	4.5	4.5	4.4	4.3	3.9	...	...
30	...	...	4.2	4.3	4.4	4.4	4.5	4.5	4.4	4.3	4.0	...	...
31													
* MEAN	...	...	3.9	4.1	4.3	4.3	4.4	4.3	4.3	4.1	3.8	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...c	...c	...c	...c	...c	...c	...c	...c	210	...	...
2	...	...	220	225	215	205	180	205	200	...c	210	...	...
3	...	...	200	215	195	200	185	200	200	...c	200	...	...
4	...	...	230	190	195	180	190	195	200	225	205	...	...
5	...	...	225	225	200	...a	...a	...a	200	...a	...a	...	...
6	...	...	210	215	225	...a	180	...a	210	200	230	...	...
7	...	...	225	210	...c	...c	210	210	190	215	...	...	...
8	...	...	230	195	215	p220	210	225	...a	200	220	...	...
9	...	...	200	190	180	200	180	180	200	215	...	...	...
10	...	...	...	225	190	210	215	195	210	200	...a	...	...
11	...	...	225	220	215	205	220	210	200	210	210	...	...
12	...	...	235	250	230	200	210	205	210	...a	...a	...	...
13	...	...	245	220	240	240	200	260	200	200	225	...	...
14	...	...	210	215	210	205	175	235	190	205	220	...	...
15	...	...	...	230	220	200	220	220	215	225	210	...	...
16	...	...	225	220	215	200	200	195	205	210	220	...	...
17	...	...	230	210	210	190	195	205	215	220	205	...	...
18	...	...	220	250	170	250	225	210	200	175	225	...	...
19	...	...	235	200	215	200	215	200	210	210	215	...	...
20	...	...	225	210	200	185	190	220	210	210	215	...	...
21	...	...	200	215	215	200	205	205	200	200	200	...	...
22	...	...	250	240	200	210	210	210	210	205	220	...	...
23	...	...	220	210	200	...c	185	210	200	215	220	...	...
24	...	...	235	220	210	200	190	210	200	210	220	...	...
25	...	...	230	225	205	200	190	195	200	210	220	...	...
26	...	...	225	220	210	200	200	200	220	210	210	...	...
27	...	...	210	225	210	190	230	215	230	210	210	...	...
28	...	...	230	230	210	200	220	210	210	220	210	...	...
29	...	...	230	220	200	195	185	220	205	205	210	...	...
30	...	...	225	210	205	175	205	220	210	225	215	...	...
31													
* MEAN	...	...	224	218	207	202	201	210	205	209	214	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 210

SEPTEMBER 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.6	0.7	...c	...c	...c	...c	...c	...c	0.6	0.6	...
2	...	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	...c	0.7	0.6	...
3	...	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.7	...c	0.7	0.5	...
4	...	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
5	...	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.7	...
6	...	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.6	...
7	...	...c	...c	...c	...c	...c	0.9	0.7	0.7	0.7	0.7	...e	...
8	...	...e	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.6	...
9	...	...e	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	...
10	...	...e	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.7	...
11	...	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	...
12	...	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.5	...e	...
13	...	...e	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	...
14	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.7	...
15	...	...e	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	...
16	...	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	...
17	...	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	...
18	...	0.6	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.7	...
19	...	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	...
20	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...
21	...	0.6	0.8	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	...
22	...	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	...
23	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.6	...
24	...	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.6	0.5	...e	...
25	...	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	...
26	...	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.6	...
27	...	...e	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7	...
28	...	0.8	0.7	0.7	0.7	0.8	0.9	0.9	0.8	0.6	0.6	0.7	...
29	...	...e	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	...e	...
30	...	...e	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	...
31													
MEAN*	...	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.3	...a	1.1
2	...	1.9	2.4	2.8	3.0	3.2	3.1	3.1	3.0	...c	2.6	2.0	1.3
3	...	2.0	2.5	2.8	3.0	3.1	3.1	3.1	3.0	...c	2.6	2.0	1.3
4	...	2.0	2.4	2.8	2.9	3.0	3.0	3.0	...a	3.0	2.6	2.0	1.3
5	...	2.2	2.5	2.8	2.9	3.0	3.2	3.0	2.9	2.6	2.2	...a	...a
6	1.0	2.0	2.4	3.0	3.0	3.1	3.2	3.2	3.0	3.0	2.5	2.0	1.3
7	...	1.8	2.4	2.8	...c	...c	3.3	3.2	3.2	2.9	2.9	2.1	...
8	1.1	2.0	2.5	2.9	3.1	3.1	3.2	3.2	3.1	3.0	2.4	2.0	1.3
9	...	2.1	2.5	2.9	3.1	2.9	3.0	3.1	3.2	3.0	2.5	2.0	...
10	1.1	2.2	2.8	2.9	3.0	3.0	3.2	3.2	3.1	2.9	2.6	...a	...
11	1.2	2.2	2.5	2.8	3.0	3.1	3.2	3.3	3.1	2.9	2.5	2.3	...
12	...	2.2	2.4	2.8	3.0	3.1	3.1	3.1	3.0	2.7	2.3	1.8	1.3
13	1.3	2.1	2.5	2.8	3.0	3.1	3.1	3.1	3.0	2.8	2.5	2.0	...
14	1.2	2.1	2.5	2.8	3.1	3.3	3.3	3.3	3.2	2.9	2.6	2.1	...
15	...	2.3	2.5	2.9	3.0	3.2	3.2	3.1	3.1	2.9	2.6	2.0	...
16	1.5	2.1	2.5	2.9	3.0	3.1	3.1	3.1	3.0	3.0	2.5	2.0	...
17	1.5	2.3	2.6	2.8	3.0	3.1	3.0	3.1	3.1	2.9	2.5	2.1	...
18	1.5	2.0	2.7	2.6	2.9	3.1	3.2	3.3	3.0	2.9	2.8	2.2	...
19	1.4	2.3	2.7	3.0	3.2	3.2	3.1	3.2	3.0	2.9	2.5	2.0	1.3
20	1.5	2.3	2.4	3.0	3.1	3.1	3.1	3.0	3.0	2.9	2.6	2.3	1.5
21	1.4	2.4	2.8	2.8	3.0	3.2	3.2	3.2	3.1	3.0	2.5	2.0	1.3
22	1.3	2.3	2.5	2.8	3.0	3.3	3.3	3.2	3.1	2.9	2.6	2.2	...
23	1.6	2.2	2.6	2.8	3.3	3.3	3.3	3.3	3.1	3.0	2.7	2.1	1.4
24	1.5	2.0	2.5	2.8	3.0	3.0	3.1	3.3	3.1	3.0	2.6	2.0	1.6
25	1.4	2.3	2.9	2.8	3.0	3.1	3.2	3.3	3.1	3.0	2.6	2.1	1.4
26	1.5	2.2	2.6	3.1	3.1	3.1	3.3	3.1	3.0	3.0	2.6	2.4	...
27	1.5	2.0	2.6	2.9	3.1	3.2	3.3	3.2	3.1	3.0	2.7	2.1	1.4
28	1.7	2.4	2.6	2.9	3.1	3.1	3.2	3.4	3.2	3.2	2.7	2.2	...
29	1.7	2.4	2.6	2.8	3.0	3.1	3.1	3.3	3.3	3.0	2.6	2.2	...
30	1.5	2.5	2.7	3.0	3.1	3.3	3.3	3.3	3.3	3.1	2.6	2.2	...
31													
MEAN*	1.4	2.2	2.6	2.9	3.0	3.1	3.2	3.2	3.1	2.9	2.6	2.1	1.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 211

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1942 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND OCTOBER 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.5	4.8	4.5	4.4	4.2	4.3	5.1	5.9	6.2	5.8	6.0	6.5	7.0	7.5	7.2	6.9	6.7	6.3	6.3	5.4	4.4	4.0	4.1	4.0	5.5
2	4.2	4.1	4.0	4.1	3.5	3.6	4.3	5.3	5.5	5.9	6.7	7.5	7.1	7.2	7.8	7.2	7.0	5.9	5.8	6.1	5.5	5.2	5.1	4.8	5.6
3	4.5	4.2	3.8	3.3	2.3	2.4	3.8	4.5	5.4	5.4	5.8	5.9	6.5	7.0	7.6	6.2	6.3	5.7	4.5	4.7	4.3	4.0	3.5	3.6	4.8
4	3.6	3.7	3.9	3.6	...f	3.5	3.9	4.1	4.3	4.6	4.7	5.1	5.5	5.6	5.1	5.3	5.3	5.2	5.1	4.0	3.6	3.7	3.4	3.6	...
5	3.5	3.6	3.6	3.2	3.1	3.3	4.3	4.7	5.0	5.5	5.9	6.2	6.5	7.6	6.0	5.6	5.5	4.9	4.7	4.5	4.0	3.3	3.0	3.0	4.6
6	2.8	2.8	2.6	2.2	2.1	2.1	3.3	4.4	5.4	6.0	6.2	6.6	6.4	6.0	6.4	p6.1a	6.4	6.0	6.2	5.8	4.6	4.0	3.6	3.3	4.6
7	3.2	3.3	3.1	2.9	2.9	3.0	4.3	5.5	5.8	6.0	6.8	7.0	7.7	8.4	...c	...c	...c	6.8	6.6	6.2	5.4	4.5	4.1	3.8	...
8	3.5	3.6	3.7	3.2	2.8	2.8	4.0	4.9	5.5	6.0	6.1	6.2	6.7	6.6	6.7	6.5	...c	6.3	6.2	...a	4.6	3.7	3.6	3.3	...
9	...a	3.3	3.2	2.9	2.7	2.7	4.0	5.0	5.7	6.0	5.7	7.0	7.9	8.4	8.0	7.5	6.7	6.5	5.9	4.7	4.2	3.8	3.6	3.2	...
10	3.2	3.2	3.4	3.2	3.1	3.3	4.5	5.1	5.5	...c	6.1	7.2	8.4	8.2	7.7	7.0	7.0	6.5	6.8	6.7	6.2	5.3	5.0	4.7	...
11	4.4	4.4	4.0	3.7	3.5	3.3	3.8	4.5	4.8	5.2	5.6	5.6	6.1	6.4	6.6	6.4	6.4	6.3	5.9	5.5	5.0	4.4	4.3	4.2	5.0
12	4.0	4.0	4.3	3.3	3.3	3.2	4.7	6.0	6.2	8.0	8.0	7.0	7.8	8.3	8.1	7.2	6.5	6.3	6.1	6.2	6.0	5.0	5.2	5.4	5.8
13	4.9	4.0	3.2	3.0	3.2	2.8	3.4	3.8	...g	...g	...g	5.8	5.9	7.2	6.7	5.8	5.7	6.1	6.1	6.5	6.0	4.5	4.2	4.1	...
14	4.2	3.9	3.3	3.4	3.5	3.4	4.3	4.5	4.3	4.5	4.6	5.0	5.2	5.0	4.8	4.5	4.7	4.8	4.7	4.5	4.3	4.1	3.8	3.5	4.1
15	3.5	3.6	3.6	2.7	2.5	3.0	4.7	5.3	4.7	4.4	4.7	5.0	5.4	6.3	6.7	6.7	6.0	5.4	4.9	4.3	4.2	3.4	3.7	...f	...
16	...f	...f	...f	2.3	1.8	2.0	4.4	4.7	4.6	5.3	5.7	5.5	6.5	6.7	5.7	5.4	5.5	5.4	5.7	4.9	3.9	3.3	3.3	3.3	...
17	3.2	3.1	3.1	2.9	3.0	2.5	3.6	3.8	...g	...g	4.3	4.7	5.0	5.2	5.4	5.5	5.2	4.9	4.5	4.0	3.2	3.3	2.7	2.7	...
18	2.5	2.5	...f	...f	3.0	3.3	4.0	4.4	4.3	4.5	4.7	...a	5.4	5.7	6.1	5.8	5.5	5.7	5.5	4.8	4.1	3.8	3.7	3.7	...
19	3.5	3.6	3.3	3.2	2.8	2.9	4.3	4.6	...g	4.3	4.5	5.0	5.4	5.6	4.9	5.0	4.8	5.0	4.5	4.5	4.2	3.5	3.6	4.0	...
20	3.8	3.9	3.2	2.5	2.6	2.8	3.6	4.2	4.6	4.4	4.6	4.8	5.2	4.9	4.8	4.7	4.9	4.6	4.9	5.0	4.2	3.8	3.7	3.4	4.2
21	3.7	3.5	3.9	3.0	2.9	2.5	3.7	4.4	...a	5.0	5.1	...a	5.3	5.5	5.5	5.7	5.6	5.4	5.5	5.5	4.7	3.8	3.5	3.4	...
22	3.5	3.3	3.2	...a	...a	2.6	3.9	4.5	4.7	4.9	5.3	5.7	6.2	6.3	6.3	6.2	5.7	5.0	5.3	4.9	4.0	3.5	3.6	3.5	...
23	3.4	3.4	3.1	2.5	2.5	...a	4.0	4.9	5.3	5.7	5.7	6.2	7.1	7.4	7.1	6.5	6.3	6.0	5.5	5.2	4.4	4.0	3.9	3.7	...
24	3.7	3.5	3.2	3.0	2.8	3.1	4.5	5.7	5.9	5.7	6.2	6.4	6.7	7.0	7.0	7.0	6.2	6.3	6.6	5.8	5.0	3.5	3.2	3.2	5.0
25	3.2	3.3	3.3	3.0	2.9	2.9	4.3	4.9	5.3	5.2	5.4	6.1	7.0	7.4	8.0	7.8	7.6	6.9	6.7	6.1	5.0	4.2	4.0	3.9	5.2
26	3.9	3.8	3.9	3.3	2.8	3.0	4.1	4.6	5.5	5.4	5.9	6.2	6.5	6.5	p7.0	7.0	6.5	6.4	5.8	4.9	4.7	4.0	3.7	3.8	5.0
27	3.8	3.8	3.6	3.0	2.6	2.8	4.6	4.8	5.7	5.7	6.3	7.0	7.4	8.5	8.6	8.2	7.5	6.4	5.9	5.5	5.3	5.0	4.9	4.8	5.5
28	4.8	4.3	4.2	3.8	3.0	3.4	3.9	5.5	6.0	6.5	7.2	7.8	8.2	8.3	8.1	8.0	7.8	6.7	6.4	6.3	6.1	5.8	5.5	5.1	6.0
29	4.7	3.9	3.5	3.7	...c	...c	...c	...c	...c	5.0	5.4	5.0	4.7	5.2	4.7	4.6	5.2	5.1	4.9	4.0	3.9	4.3	3.8	3.9	...
30	3.7	3.5	2.1	2.0	2.1	2.7	3.5	3.9	...g	...a	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
31	...c	...c	...c	...c	...c	...c	...c	...c	...c	4.4	4.8	5.4	5.4	5.2	4.9	4.5	4.8	4.8	4.9	4.4	4.2	3.8	3.6	3.6	...
MEAN*	3.8	3.6	3.5	3.1	2.9	3.0	4.1	4.8	p5.3	5.4	5.7	6.0	6.4	6.7	6.5	6.2	6.0	5.8	5.6	5.2	4.6	4.1	3.9	3.8	4.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 212

OCTOBER 1942 — OCTOBER 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	225	250	235	245	250	225	235	245	255	280	310	310	300	285	280	275	265	245	225	215	215	230	240	240	253
2	250	225	230	215	205	235	235	255	290	315	310	300	290	320	285	280	270	255	230	235	255	280	270	285	263
3	300	250	265	225	320	310	265	280	290	375	345	370	350	340	310	295	290	250	230	240	235	240	245	275	287
4	270	270	255	240	270	260	250	250	430	460	450	430	370	330	400	345	310	270	225	225	250	250	285	255	306
5	260	245	230	235	235	250	240	315	330	350	335	350	340	285	300	320	290	230	250	230	240	250	280	265	277
6	255	240	235	215	270	265	240	360	330	300	295	270	285	315	280	p330a	280	...a	230	210	230	230	240	260	...
7	270	...a	250	230	235	245	235	225	260	300	295	300	305	295	...c	...c	...c	240	230	215	240	235	235	230	...
8	...a	...a	250	...a	250	270	255	300	315	300	300	320	300	320	285	310	...c	265	...a	...a	250	...a	275	300	...
9	...a	250	250	235	270	260	240	285	260	280	390	320	310	300	270	275	270	260	230	250	...a	...a	235	245	...
10	260	270	235	220	240	240	250	230	290	...c	355	300	285	275	275	290	275	240	240	225	225	225	245	250	...
11	250	235	225	230	240	240	250	330	350	350	335	350	330	310	300	295	280	260	235	230	230	240	265	250	275
12	250	275	225	215	230	300	250	270	300	265	270	290	320	320	280	280	270	245	240	260	240	300	235	245	266
13	235	...a	280	270	280	265	245	245	...f	...f	...f	375	380	300	270	295	280	230	250	240	230	250	275	250	...
14	250	235	270	255	275	275	245	240	435	515	500	...b	415	420	455	545	355	280	250	235	240	255	...a	260	...
15	...a	240	230	225	250	...a	255	300	350	530	430	460	425	345	365	285	290	265	...a	...a	240	260	...a	...a	...
16	...a	...a	...a	240	230	275	240	350	480	375	380	450	350	315	330	360	310	290	245	215	235	...a	270	270	...
17	295	280	...a	250	265	290	245	225	...f	...f	...	...a	425	390	370	345	325	275	240	225	250	275	290	270	...
18	285	...a	...a	...a	250	235	230	270	...	...	470	...a	405	375	330	320	330	270	240	230	...a	275	285	285	...
19	280	270	270	260	275	270	250	280	...f	...	...	460	390	365	475	365	265	240	260	245	245	...a	...a	...a	...
20	...a	235	220	275	290	275	260	395	440	...	465	490	380	465	420	450	335	260	265	230	240	260	260	320	...
21	300	320	260	285	250	270	...a	...a	...a	360	400	...a	...a	350	350	340	300	300	260	230	220	230	275	...a	...
22	...	...	...	...	...	...	245	335	395	...a	375	...a	330	320	320	290	290	210	245	220	230	...a	280	...	...
23	...	...	...	270	...	...a	260	285	340	340	350	365	320	295	295	290	280	260	240	220	240	260	255	...a	...
24	...a	...a	...a	240	...a	270	...a	240	235	290	300	320	325	325	310	280	235	230	245	215	220	...a	...a	...a	...
25	280	260	250	270	240	250	245	240	325	370	445	355	345	330	315	320	295	270	235	235	235	260	275	280	289
26	270	250	...a	...a	275	275	240	250	325	385	365	365	360	375	p325	300	300	270	230	220	240	255	280	285	...
27	275	250	240	220	225	...a	230	220	290	380	355	330	340	325	295	300	260	250	240	230	240	250	250	270	...
28	...a	250	225	220	245	245	235	235	300	335	325	325	320	310	300	290	280	235	240	240	255	255	285	275	...
29	290	300	290	275	...c	...c	...c	...c	...c	490	440	500	...	475	...	...	440	345	270	250	315	285	315	...a	...
30	310	265	...a	310	305	315	265	...	...f	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
31	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	425	430	410	445	...	400	...a	280	...a	270	...a	...a	...a	...
MEAN*	270	258	246	245	257	264	246	276	331	361	355	365	347	339	330	321	299	259	243	230	241	254	266	267	286

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 213

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1942 | OCTOBER 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION													MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	3.6	4.0	4.4	4.6	4.5	4.6	4.4	4.4	4.3	3.9	3.3	...	...	230	220	220	200	200	180	190	205	190	220	220	...
2	...	3.3	4.2	4.2	4.4	4.4	4.5	4.5	4.4	4.3	4.0	3.3	...	...	240	220	220	215	200	200	210	205	230	230	220	...
3	...	3.5	3.8	4.3	...a	4.4	4.3	4.3	4.3	...a	3.9	...	...	...	235	220	260	...a	...a	215	200	220	...a	250	...	...
4	...	...	3.8	4.1	4.1	4.2	4.2	4.2	4.2	4.1	3.8	...	...	...	...	235	240	230	205	210	230	215	220	230	...	...
5	...	...	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.1	4.0	...	...	...	...	210	220	225	200	...a	215	220	220	220	...	...
6	...	3.6	4.0	4.1	4.3	4.4	4.3	4.3	4.4	...a	...a	...	...	...	225	210	240	220	220	215	200	215	...a	...a	...	...
7	...	...	4.0	4.2	4.4	4.4	4.4	4.5	...c	...c	...c	...	...	...	...	225	...a	...a	...a	...a	...a	...c	...c	...c	...	...
8	...	3.7	4.0	...a	4.4	4.3	4.4	4.4	4.3	4.2	...c	...	...	...	220	...a	...a	210	200	...a	200	225	215	...c	...	...
9	...	3.5	4.0	4.3	4.5	...a	...a	4.5	4.4	4.3	4.0	...	...	...	230	215	220	235	...a	...a	...a	215	215	215	...	...
10	...	...	4.2	...c	4.7	4.7	4.5	4.5	4.5	4.3	4.0	...	...	...	...	215	...c	...a	225	205	225	225	220	225	...	...
11	...	3.6	4.0	4.3	4.4	4.4	4.5	4.6	4.4	4.3	4.0	...	...	...	225	230	230	200	...a	210	190	225	210	240	...	...
12	...	3.6	4.2	4.3	4.4	4.5	4.6	4.5	4.5	4.2	4.0	...	...	...	225	220	...a	...a	200	...a	...a	...b	...a	240	...	...
13	...	...	4.0	4.0	4.1	4.3	4.4	4.3	4.3	4.2	3.9	...	...	...	...	235	200	...a	...a	200	205	235	220	210	...	...
14	...	...	3.8	4.0	4.1	...b	4.2	4.2	4.2	4.2	3.9	3.2	...	...	...	235	230	235	...b	...a	...a	230	225	230	225	...
15	...	3.6	3.9	4.0	4.2	4.2	4.4	4.3	4.2	4.1	3.8	3.3	...	...	230	225	230	215	220	190	...a	235	240	230	220	...
16	...	3.8	4.1	4.2	4.4	4.3	4.3	4.4	4.2	4.2	4.0	3.5	...	...	220	235	240	...a	...a	200	...a	...a	240	...a	220	...
17	...	...	3.8	4.0	4.0	...a	4.2	4.2	4.1	...a	3.9	3.3	...	...	...	210	205	210	...a	...a	230	...a	...a	225	225	...
18	...	3.6	4.0	4.1	4.2	...a	4.3	4.3	4.2	4.2	4.0	3.5	...	...	230	230	...a	...a	...a	...a	200	240	230	230	225	...
19	...	3.6	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.0	...	...	...	...	230	230	210	...a	200	215	200	250	235	...	...	...
20	...	3.5	3.8	4.0	4.1	4.2	4.2	4.3	4.1	4.2	3.9	...	...	...	225	230	220	200	200	190	215	200	240	240	...	...
21	...	...	...a	...a	4.2	...a	...a	4.3	4.3	4.2	4.0	3.7	...	...	...	...a	...a	...a	...a	...a	215	225	230	245	250	...
22	...	3.7	4.1	4.2	...a	...a	4.3	4.4	4.3	4.1	4.0	...	...	...	230	...a	...a	...a	...a	225	...a	230	...a	225	...	...
23	...	3.7	4.2	4.3	4.4	4.5	4.4	...a	...a	4.2	...a	...	...	...	235	225	200	195	230	...a	...a	...a	...a	...a	...	...
24	...	...	...	4.2	4.2	4.6	4.5	4.5	4.4	4.2	...	...	...	...	...	...	225	215	...a	...a	...a	...a	245	...	...	...
25	...	...	4.2	4.4	4.4	4.4	4.4	4.4	4.3	4.2	4.0	3.3	...	...	...	240	230	...a	...a	200	200	235	230	240	220	...
26	...	...	4.1	4.3	4.4	4.4	4.5	4.5	p4.3	4.2	4.1	3.5	...	...	...	240	230	220	210	220	225	p230	240	230	240	...
27	...	...	4.2	4.6	4.5	4.6	4.7	4.8	4.5	...b	4.1	...	...	...	...	215	210	230	230	230	...a	...a	...b	250	...	...
28	...	...	4.3	4.6	4.6	4.7	4.7	4.7	4.6	4.3	4.2	...	...	...	...	220	235	230	235	210	220	215	215	235	...	...
29	...	...	...c	4.1	4.2	4.3	4.3	4.3	4.3	4.1	3.9	3.5	...	...	...	...c	...a	...a	...a	225	235	240	250	235	250	...
30	...	3.7	3.9	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...	245	235	...c	...c	...c	...c	...c	...c	...c	...c	...	...
31	...	...	...c	4.0	4.3	4.3	4.3	4.3	4.3	4.2	4.1	...	...	...	...c	...c	200	215	...a	...a	200	225	210	...a	...	...
* MEAN	...	3.6	4.0	4.2	4.3	4.4	4.4	4.4	4.3	4.2	4.0	3.4	...	...	230	225	223	217	212	208	210	224	226	232	229	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 214

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.7	0.7	0.8	0.8	0.7	0.9	0.8	0.8	0.7	0.7	...	1.7	2.5	2.8	3.0	3.1	3.1	3.4	3.3	3.3	3.0	2.9	2.2	1.4
2	...	0.6	0.7	0.7	0.7	0.8	0.7	0.9	0.7	0.7	0.7	0.6	...	1.8	2.5	2.9	3.1	3.1	3.3	3.1	3.3	3.3	3.1	2.8	2.2	...
3	...	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	...	1.8	2.3	2.7	2.9	3.1	3.2	3.3	3.2	3.2	3.0	2.7	2.6	...
4	...	...e	0.7	0.7	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.7	...	1.8	2.1	2.5	2.9	3.1	3.2	3.2	3.2	3.1	2.8	2.5	2.2	1.5
5	...	0.9	0.7	0.8	0.7	0.8	0.9	0.9	0.7	0.7	0.6	...e	...	1.8	2.1	2.5	2.8	3.0	3.1	3.1	...a	...a	3.0	2.7	2.0	1.4
6	...	0.5	0.7	0.6	0.6	0.6	0.8	0.9	0.8	0.8	0.6	0.6	...	1.6	2.2	2.7	3.0	3.0	3.2	3.1	3.1	3.2	...a	2.6	1.9	...a
7	...	0.5	0.7	0.7	0.8	0.8	0.7	0.8	...c	...c	...c	...e	...	1.7	2.4	2.7	3.0	3.2	3.3	3.3	3.2	...c	...c	...c	...a	...a
8	...	0.5	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.7	...c	0.5	...	1.7	2.2	2.7	3.0	3.0	3.1	3.0	...a	...a	3.0	...c	...a	...
9	...	0.6	0.7	0.7	0.9	0.9	1.0	0.9	0.9	0.9	0.7	0.6	...	1.8	2.3	2.8	3.0	3.2	3.2	3.2	3.1	3.2	3.1	2.8	...a	...
10	...	0.7	0.6	...c	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.5	...	1.6	2.4	2.9	...c	3.2	3.1	3.2	...a	3.2	3.1	2.8	2.3	1.5
11	...	0.5	0.7	0.7	0.9	1.0	0.9	0.9	0.8	0.8	0.7	...e	...	1.8	2.4	2.9	3.0	3.2	3.1	3.1	3.3	3.3	3.1	2.9	...a	1.4
12	0.5	0.8	0.7	0.8	0.8	0.9	0.8	0.9	...b	1.1	0.8	0.7	...	1.9	2.5	2.8	3.0	3.0	3.1	3.0	3.0	...b	...a	2.8	2.3	1.5
13	...	0.7	0.7	0.6	0.7	0.9	1.0	0.8	0.7	0.8	0.7	...e	...	1.4	2.3	2.7	3.0	3.1	3.2	3.3	3.3	3.2	3.1	2.8	2.4	...a
14	0.5	0.6	0.6	0.7	0.7	...b	1.1	0.8	0.9	0.8	0.7	0.5	...	2.0	2.2	2.8	3.0	3.1	...b	3.0	3.0	3.1	3.1	2.7	2.2	1.5
15	...	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.5	...	1.9	2.3	2.7	3.0	3.1	3.2	3.2	3.2	3.1	3.0	2.5	...a	...a
16	...	0.8	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	...	1.8	2.3	2.7	3.0	3.1	3.2	3.3	3.3	3.2	3.0	2.7	2.3	1.4
17	...	0.7	0.7	0.7	0.7	0.9	0.8	0.8	0.7	0.7	0.6	0.6	...	1.9	2.3	2.6	3.0	3.2	3.3	3.3	3.3	3.1	3.0	2.7	2.2	1.6
18	...	0.7	0.7	0.8	0.8	0.8	0.9	1.0	0.9	0.7	0.6	0.6	0.5	...	2.4	2.8	3.0	3.2	3.2	3.1	3.0	3.1	3.0	2.7	2.3	1.7
19	...	1.0	0.6	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.7	0.6	...	1.9	2.4	2.7	3.0	3.1	3.1	3.1	3.0	3.1	2.9	2.6	2.0	1.7
20	0.6	0.7	0.7	0.7	0.7	0.9	0.9	0.9	1.0	0.7	0.7	0.5	...	1.8	2.3	2.8	3.0	3.1	3.1	3.2	3.2	3.2	3.0	2.7	2.3	1.7
21	...	0.6	0.7	0.6	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.6	...	1.9	2.4	2.7	3.0	3.2	3.2	3.3	...c	3.2	2.9	2.6	2.2	1.1
22	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.5	1.9	2.4	2.8	3.0	3.2	3.2	3.2	3.3	3.2	3.0	2.7	2.2	1.4
23	...	0.5	0.6	0.6	0.9	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.5	...a	2.5	2.8	3.1	3.3	3.2	3.3	3.3	3.1	3.0	2.6	2.1	1.9
24	...	0.7	0.7	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.6	...a	2.5	2.8	3.1	3.2	3.3	3.3	3.3	3.3	3.0	2.7	2.2	...a
25	0.5	0.6	0.6	0.7	0.6	0.7	0.9	1.0	0.9	0.7	0.7	0.6	0.6	2.0	2.7	2.8	3.0	3.3	3.3	3.2	3.1	3.1	3.0	2.4	2.3	1.7
26	...	0.8	0.7	0.9	1.0	1.0	1.1	1.0	p0.9	0.9	0.7	0.7	0.6	2.1	2.6	2.9	3.1	3.3	3.3	3.5	3.4	p3.4	3.2	2.9	2.4	1.7
27	...	0.6	0.7	0.9	0.9	1.0	1.0	p2.2b	0.9	...b	0.8	0.7	0.6	1.9	2.5	3.0	3.1	3.5	3.4	3.6	3.6	3.4	...a	3.2	2.6	1.8
28	0.6	0.7	0.7	0.6	0.7	0.6	0.9	0.8	0.9	0.8	0.7	0.6	0.6	2.0	2.7	3.0	3.2	3.3	3.4	3.5	3.5	3.4	3.1	3.0	2.4	1.8
29	...	...c	...c	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.7	...	...c	...c	...c	3.0	3.1	3.3	3.3	3.6	3.2	3.1	2.8	2.4	1.8
30	...	0.6	0.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	2.1	2.5	2.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
31	...	...c	...c	0.9	0.9	0.9	0.9	0.9	1.0	...c	0.8	0.7	...	...c	...c	...c	3.0	3.2	3.3	3.4	...c	...c	...c	2.7	2.1	...a
MEAN*	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.6	0.6	1.8	2.4	2.8	3.0	3.2	3.2	3.2	3.2	3.2	3.0	2.7	2.2	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 215

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — NOVEMBER 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.8	3.3	2.9	2.9	...f	2.9	4.3	4.9	5.0	5.6	6.1	6.1	7.4	7.4	6.7	6.5	6.6	6.8	6.6	6.8	5.6	3.6	...f	...f	...
2	3.0	~2.9	3.1	3.7	3.3	3.3	5.0	5.1	...c	6.1	6.4	7.0	8.3	8.1	8.3	7.7	7.6	7.0	6.8	7.4	6.9	6.1	6.0	5.7	...
3	5.7	5.7	5.3	4.0	4.2	3.4	...c	...c	...c	...c	7.2	7.3	7.4	7.5	7.5	7.3	7.4	7.3	7.0	7.0	6.6	5.7	5.3	4.9	...
4	4.8	4.7	4.2	3.8	3.6	3.7	5.5	6.0	6.6	7.0	8.3	8.8	8.8	8.7	8.6	8.3	8.3	10.0	9.8	8.7	7.0	5.1	4.2	4.1	6.6
5	4.2	4.1	3.8	3.4	3.4	4.0	5.1	5.7	6.2	6.0	6.9	8.1	9.3	9.5	9.4	8.9	8.4	7.8	7.5	7.0	6.1	5.4	5.2	5.2	6.3
6	4.7	4.5	3.9	3.2	3.0	3.3	4.9	6.2	6.4	6.9	7.6	...c	8.4	...c	...c	...c	...c	...c	...c	...c	...c	5.1	4.9	5.0	...
7	4.9	4.5	4.1	3.7	3.4	3.8	5.1	5.9	6.6	7.2	7.8	8.3	9.2	9.9	10.0	9.4	9.2	8.5	7.9	7.2	...c	4.9	4.7	4.5	...
8	4.6	4.5	4.1	3.6	3.0	3.6	4.9	4.0	5.5	...c	6.5	7.0	8.0	8.3	7.5	7.4	7.0	6.6	7.0	7.9	5.8	4.8	4.4	4.0	...
9	4.3	4.1	3.6	3.5	3.3	3.0	4.1	4.4	4.5	...g	4.4	5.0	5.5	5.8	5.8	5.8	5.5	5.5	5.4	5.6	5.0	4.2	4.2	4.2	...
10	4.1	4.5	4.5	4.1	4.0	4.3	4.5	4.9	4.7	5.2	5.3	p6.3	...c	7.2	7.7	8.0	7.7	7.0	7.2	6.3	5.2	4.5	4.3	4.1	...
11	4.2	4.7	4.1	3.2	3.9	3.5	4.8	5.2	6.5	...c	6.3	6.4	7.1	7.2	7.1	...a	6.6	6.7	7.2	7.5	5.7	5.0	4.9	4.6	...
12	4.3	4.2	...c	3.3	...c	...c	...c	...c	...c	...c	...a	5.7	6.3	7.1	7.0	7.0	7.5	7.4	6.8	6.2	5.0	4.4	3.7	3.5	...
13	3.5	4.6	3.9	...f	...f	4.5	4.7	5.1	5.9	5.7	6.3	6.5	7.8	8.5	8.3	7.8	7.0	6.7	7.0	7.0	6.3	5.7	4.8	4.6	...
14	4.5	4.3	4.1	4.0	3.1	3.2	3.8	4.1	4.5	4.9	5.0	5.3	5.5	5.7	6.0	5.1	5.5	5.3	5.5	5.7	5.0	4.6	4.5	4.0	4.7
15	4.0	4.0	3.8	3.5	3.3	3.3	4.1	4.5	5.5	5.8	7.2	8.1	9.3	9.3	8.3	8.8	8.4	7.5	7.2	6.7	5.5	4.6	4.0	4.0	5.9
16	4.0	3.8	3.7	3.5	3.4	3.9	4.6	4.7	5.7	6.6	7.3	7.9	8.3	8.5	8.8	8.7	8.2	8.5	8.1	7.2	5.5	4.9	4.2	4.1	6.0
17	4.1	4.0	3.4	3.4	3.7	4.0	4.3	4.5	4.8	5.4	6.2	6.9	7.1	7.4	7.7	7.9	7.5	7.5	7.2	6.9	5.6	4.9	4.3	4.0	5.5
18	3.9	3.9	...c	...c	...c	...c	...c	...c	4.7	4.8	5.2	5.7	6.1	6.6	5.8	...a	...a	6.0	6.6	6.7	5.2	4.5	4.2	4.1	...
19	4.0	4.1	4.0	3.7	3.1	3.7	5.7	5.8	5.2	5.6	5.7	6.2	6.4	6.6	...c	...c	...c	...c	...c	...c	4.7	...a	4.0	4.0	...
20	4.0	...f	...f	...f	2.8	3.3	4.9	5.0	...a	...a	...a	6.1	6.0	6.6	7.3	7.8	7.6	8.0	7.8	6.6	6.3	5.3	4.7	4.5	...
21	4.3	3.9	3.6	3.2	3.4	3.6	4.4	...c	...a	4.4	4.6	5.1	5.4	...a	5.5	5.5	5.7	6.0	6.2	6.7	5.8	5.2	4.8	4.4	...
22	4.1	3.8	3.4	3.1	2.7	3.3	4.0	...a	...a	...a	5.8	6.0	6.1	6.2	6.5	6.7	6.5	6.3	6.4	6.7	5.4	4.8	4.7	4.5	...
23	4.9	4.8	3.6	3.3	3.6	4.2	5.0	5.7	6.2	6.3	6.9	7.3	8.2	8.1	8.3	8.3	8.9	8.7	8.8	8.2	6.0	5.1	4.9	4.8	6.2
24	4.6	4.7	4.3	4.0	3.0	3.4	4.7	5.0	5.0	5.9	5.7	5.9	6.0	5.8	5.4	5.8	6.5	7.0	7.3	...c	7.4	7.0	5.6	5.6	...
25	4.9	4.7	4.1	4.0	3.0	3.4	3.7	3.9	4.6	...a	...a	4.9	5.4	6.2	6.2	...a	...a	5.6	5.5	5.6	5.6	4.5	4.6	4.5	...
26	4.6	4.2	3.7	3.6	3.8	3.6	3.9	4.1	...a	5.4	5.4	5.6	4.9	5.8	6.3	5.9	5.9	5.8	6.3	6.1	5.4	5.3	5.0	5.0	...
27	4.9	4.1	3.5	3.6	3.4	3.3	4.4	4.5	4.8	4.8	5.3	5.5	5.0	6.1	...a	6.0	5.8	5.9	6.7	7.7	5.4	5.0	4.3	4.2	...
28	4.5	4.2	4.0	3.9	3.6	3.6	4.4	4.8	5.0	5.4	...a	...a	6.5	6.9	7.0	7.7	7.0	7.4	7.1	6.8	6.2	5.4	5.3	5.4	...
29	5.5	5.3	4.4	4.4	4.4	3.8	4.1	4.4	5.8	5.8	6.5	8.8	8.5	7.8	7.3	7.5	6.9	7.4	8.2	8.0	6.6	5.5	5.2	5.0	6.1
30	5.0	4.7	4.4	4.1	3.7	3.9	4.5	5.4	5.6	5.9	6.8	7.2	7.0	7.2	7.4	7.9	8.5	7.7	7.7	7.3	7.0	6.1	5.6	5.7	6.1
31																									
MEAN*	4.4	4.3	3.9	3.6	3.4	3.6	4.6	5.0	5.4	5.8	6.3	6.6	7.1	7.4	7.3	7.4	7.2	7.1	7.1	6.9	5.8	5.1	4.7	4.6	5.6

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 216

NOVEMBER 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1942

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	...a	...a	...a	...a	...a	310	290	330	390	350	390	340	310	335	340	320	...a	...a	...a	...a	...a	...a	...a	...
2	290	330	285	240	235	260	230	255	...c	360	345	350	310	...a	...a	305	290	270	260	230	230	250	250	270	...
3	...a	235	240	235	215	...c	...c	...c	...c	...c	310	310	325	315	300	305	290	260	245	235	230	240	250	270	...
4	250	245	240	265	...a	...a	230	220	280	330	325	300	290	300	290	300	300	280	240	p220	210	220	270	270	...
5	270	260	...a	250	255	255	240	260	280	350	350	330	320	300	240	285	280	260	240	230	245	...a	270	270	...
6	245	...a	...a	...a	260	250	240	285	300	305	325	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	235	270	270	...
7	270	265	250	...a	245	250	235	240	330	310	320	355	330	310	300	...c	285	...a	240	225	230	240	290	285	...
8	280	...a	240	235	265	280	250	240	380	365	355	360	325	300	320	320	305	315	280	240	210	250	270	...a	...
9	270	...a	...a	...a	...a	300	360	385	460	...f	...	460	430	390	350	340	340	315	255	240	230	...a	...a	275	...
10	...a	265	...a	...a	275	...a	...a	240	...	420	380	p350	...c	...c	325	300	285	285	250	...a	...a	260	280	295	...
11	270	235	225	220	240	250	235	270	300	...c	340	...a	350	330	325	...a	310	300	270	220	230	260	270	270	...
12	245	250	...a	230	...c	...c	...c	...c	...c	...c	...a	395	385	320	325	320	300	240	245	220	220	230	255	...a	...
13	...a	250	...a	260	...a	235	230	...a	...a	...a	350	...a	330	310	300	300	295	285	265	230	...a	230	260	280	...
14	260	230	255	220	225	280	245	...	460	435	460	415	400	385	330	390	340	350	250	240	255	...a	...a	...a	...
15	...a	...a	...a	270	275	270	240	245	...a	...a	...a	325	310	285	300	285	260	...a	...a	...a	225	225	255	285	...
16	...c	...c	...c	230	270	...c	225	260	350	315	330	345	310	315	300	280	290	260	...a	...a	...a	245	255	270	...
17	255	240	...a	...a	255	245	...a	215	...	430	320	310	325	320	315	300	285	280	255	235	230	230	240	265	...
18	275	250	...c	...c	...c	...c	...c	...c	385	450	430	380	390	320	360	...a	...a	...a	...a	...a	...a	...a	...a	280	...
19	...a	...a	270	250	...c	...c	...c	...c	350	...a	375	335	350	345	...c	...c	...c	...c	...c	...c	...a	...a	...a	...a	...
20	...a	...a	...a	...a	...a	260	250	325	...a	...a	...a	325	380	360	340	295	300	280	230	235	235	...a	275	270	...
21	...a	...a	260	290	290	260	310	...c	...a	...	...	...a	...a	...a	...a	...a	350	325	290	230	230	255	...a	...a	...
22	...a	...a	...a	...a	260	250	...a	...a	...a	...a	350	325	345	365	345	315	305	290	250	230	220	280	...a	...a	...
23	270	225	220	300	265	235	235	250	300	320	315	330	330	325	320	320	295	270	235	215	200	270	290	280	276
24	290	260	...a	...a	...a	235	230	250	525	445	455	460	435	445	...a	460	390	350	260	...c	235	230	...a	...a	...
25	...a	270	275	260	280	260	240	...	...a	...a	...a	...a	475	400	350	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
26	...a	...a	...a	290	255	...a	275	225	...a	395	430	390	...	435	390	370	355	...a	250	250	...a	275	310	300	...
27	245	245	290	280	290	300	240	225	450	...	440	455	375	...a	...a	...a	...a	375	315	...a	230	...a	...a	...a	...
28	275	...a	265	275	270	270	240	390	500	...a	...a	...a	400	...a	...a	320	340	300	280	240	230	285	p310c	295	...
29	260	270	235	310	290	290	225	240	...a	...	450	330	325	330	330	300	325	310	275	240	220	240	...a	...a	...
30	275	270	260	225	270	275	235	330	340	405	350	335	...a	...a	360	310	300	280	...a	235	235	...a	...a	285	...
31																									
MEAN*	266	255	254	257	261	262	250	269	372	376	368	361	355	340	324	321	309	295	284	232	228	248	271	278	293

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 217

NOVEMBER 1942 | IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY | NOVEMBER 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	3.2	3.8	4.1	4.5	4.5	4.6	4.6	4.6	4.6	4.5	...	...	...
2	...	3.6	...c	4.7	4.7	4.7	...a	...a	...a	4.4	4.2	3.6	...
3	...	...	...	...	4.6	4.7	4.8	4.7	4.7	4.5	4.3	...	...
4	...	...	4.4	4.6	4.9	4.8	4.8	4.8	4.7	4.8	4.3	4.0	...
5	...	3.9	4.2	5.0	4.8	4.9	4.9	4.8	4.6	4.5	4.1	...	...
6	...	4.0	4.4	4.5	4.6	...c	...c	...c	...c	...c	...c	...	...
7	...	...	4.5	4.6	4.6	4.8	4.7	4.7	4.5	4.4	4.2	...	...
8	...	...	4.2	4.4	4.5	4.6	4.6	4.6	4.5	4.3	4.2	4.0	...
9	3.3	3.7	4.0	4.1	4.3	4.3	4.4	4.4	4.3	4.2	4.0	3.8	...
10	...	...	4.2	4.3	4.4	...a	...c	...a	4.5	...a	4.1	3.7	...
11	...	3.5	4.3	...c	...a	...a	...a	...a	4.4	...a	4.0	...	...
12	...	...	...	...c	...a	4.3	4.4	4.4	4.4	4.3	4.1	3.5	...
13	...	...	...a	4.5	4.5	...a	4.4	4.4	4.3	4.3	4.1	3.7	...
14	...	3.8	3.9	4.0	4.2	4.3	4.3	4.2	4.2	4.2	4.0	3.7	...
15	...	...	...a	...a	...a	...a	...a	4.5	4.4	4.5	4.1	...a	...
16	...	...	...a	4.3	...a	...a	...a	...a	4.3	...a	...a	...a	...
17	...	...	4.2	4.4	...a	4.4	4.5	4.5	4.3	4.3	4.1	3.8	...
18	...	...	4.1	4.2	4.2	4.3	...a	...a	...a	...a	...a	...	...
19	...	...	4.5	...a	4.4	...a	4.4	4.4	...c	...	...	...c	...
20	...	4.0	...a	...a	...a	...a	4.5	4.4	4.3	4.3	4.1	3.7	...
21	3.4	...c	...a	4.2	4.2	...a	...a	...a	...a	...a	4.0	...a	...
22	...	...	...a	...a	4.3	4.5	4.5	4.6	4.5	4.4	4.2	3.7	...
23	...	...	4.4	...a	4.6	4.7	4.8	4.7	4.7	4.5	4.3	3.9	...
24	...	...	4.2	4.3	4.4	4.3	...a	4.4	...a	4.2	4.1	3.8	...
25	...	3.8	...a	...a	...a	...a	...a	4.4	...a	...a	...a	...a	...
26	...	...	...a	4.4	4.5	4.6	4.5	4.5	4.5	...a	...a	...a	...
27	...	...	4.3	4.3	...a	4.5	...a	...a	...a	...a	...a	4.1	...
28	...	4.0	4.2	...a	...a	...a	...a	...a	...a	...a	...a	4.0	...
29	...	...	...a	5.0	4.7	4.8	4.9	4.9	4.8	4.7	4.5	4.1	...
30	...	4.2	4.3	4.6	4.7	4.8	...a	...a	4.9	4.7	4.4	3.9	...
31													
* MEAN	3.3	3.8	4.2	4.4	4.5	4.6	4.6	4.5	4.5	4.4	4.2	3.8	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	240	225	220	220	210	215	220	...a	...a	...a	...	...	...
2	...	215	...c	215	220	215	...a	...a	...a	...a	230	...c	...
3	...	...c	...c	...c	...c	215	200	220	220	220	235	...	...
4	...	...	220	210	215	225	205	225	205	230	225	240	...
5	...	230	240	230	215	210	220	220	220	225	...a	...	...
6	...	255	245	...a	...a	...c	...c	...c	...c	...c	...c	...	...
7	...	...	255	...a	...a	...a	...a	225	215	225	225	...	...
8	...	...	...a	...a	225	200	215	220	220	240	230	...	...
9	250	250	220	240	...a	...a	240	225	...a	240	230	235	...
10	...	...	230	...a	...a	...a	...c	...a	...a	...a	...a	...a	...
11	...	230	...a	...c	...a	...a	...a	...a	...a	...a	...a	...	...
12	...	...	...	...c	...a	...a	220	...a	230	240	230	...a	...
13	...	...	...a	220	225	...a	...a	...a	200	240	230	220	...
14	...	...a	...a	...a	...a	...a	215	200	230	240	230	225	...
15	...	...	...a	...a	...a	...a	...a	...a	...a	...a	230	...a	...
16	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
17	...	...	...a	...a	...a	220	230	220	210	225	245	225	...
18	...	...	210	220	220	...a	...a	...a	...a	...a	...a	...	...
19	...	...	...a	...a	...a	...a	...a	200	...c	...c	...c	...	...
20	...	235	...a	...a	...a	...a	210	210	250	240	240	235	...
21	244	...c	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
22	...	...	...a	...a	...a	...a	...a	...a	...a	240	240	240	...
23	...	...	...a	...a	...a	190	215	200	220	230	230	240	...
24	...	...	220	...a	200	...a	...a	...a	...a	...a	...a	230	...
25	...	220	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
26	...	...	...a	200	200	...a	220	220	...a	...a	...a	...a	...
27	...	...	210	210	...a	...a	...a	...a	...a	...a	...a	...a	...
28	...	230	240	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
29	...	...	...a	230	205	...a	225	235	245	235	240	240	...
30	...	230	220	210	200	240	...a	...a	...a	...a	250	...a	...
31													
* MEAN	245	235	228	219	212	214	218	217	222	234	234	233	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 218

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.6	0.6	0.7	0.7	0.9	0.9	0.9	1.0	0.9	0.9	1.0	0.9	0.7
2	0.6	0.7	...c	1.0	1.1	1.0	1.0	1.0	1.0	0.9	0.7	0.6	0.7
3	...c	...c	...c	...c	1.0	1.0	0.9	0.9	1.0	0.8	0.7	0.6	...e
4	0.6	0.6	0.7	0.9	0.9	0.9	1.0	p2.0b	0.9	0.7	0.6	0.7	0.5
5	0.6	0.7	0.8	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.8	0.6	0.6
6	0.7	1.0	0.9	0.9	1.0	...c	...c	...c	...c	...c	...c	...c	...c
7	0.6	0.7	0.8	0.8	0.9	0.8	0.7	0.9	0.9	0.9	0.8	0.7	0.6
8	0.6	0.6	0.6	...c	0.8	0.8	0.8	...c	0.9	...c	0.7	0.7	0.6
9	0.6	0.9	0.8	0.9	0.8	0.9	1.0	0.9	0.9	0.8	0.7	0.7	0.6
10	0.6	0.8	0.8	0.9	0.9	p0.9	...c	0.9	0.9	0.9	0.9	0.7	0.7
11	...e	0.7	0.8	...c	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.7
12	...c	...c	...c	...c	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.6	0.6
13	0.7	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.8	0.7	...c	0.6	...c
14	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6
15	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.7	0.7	0.6
16	0.6	0.6	0.7	0.8	0.9	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.8
17	0.6	0.7	0.8	0.8	0.9	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.6
18	...c	...c	0.7	0.8	0.8	0.8	0.8	0.9	1.0	0.7	0.7	0.7	0.6
19	0.6	0.7	0.7	0.8	0.9	0.9	1.0	...c	...c	...c	...c	...c	...c
20	0.6	0.7	0.7	0.7	0.8	0.8	1.0	0.9	0.8	0.8	0.8	0.6	0.6
21	0.6	...c	0.9	0.9	1.0	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.6
22	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.6
23	0.6	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.8	0.7	0.6
24	0.6	0.6	0.7	0.7	0.7	0.9	0.9	0.9	...b	0.9	0.7	0.7	0.6
25	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.9	1.0	0.9	0.7	0.6	0.7
26	0.6	0.7	0.7	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.7	0.7	0.6
27	0.7	1.0	0.8	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7
28	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.7	0.6
29	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.6
30	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	0.7	0.7	0.6
31													
MEAN*	0.6	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.1	2.6	3.0	3.2	...c	3.3	3.3	3.3	3.1	3.0	2.6	2.2	...a
2	2.0	2.5	...c	2.9	3.3	2.9	...a	...a	2.9	...c	...c	...c	...c
3	...c	...c	...c	...c	3.2	3.2	...	3.5	3.4	3.1	2.9	2.5	1.8
4	2.2	2.6	3.0	3.2	3.3	3.4	3.4	3.5	3.5	3.3	3.0	2.4	1.8
5	2.0	2.6	2.9	3.2	3.3	3.4	3.5	3.5	...c	3.3	3.0	2.5	1.8
6	1.9	2.6	3.0	3.2	3.3	...c	...c	...c	...c	...c	...c	...c	...c
7	2.1	2.6	3.0	3.3	3.3	3.4	3.5	3.4	3.3	3.3	2.9	...a	...c
8	2.0	2.6	3.0	3.2	3.2	3.2	3.1	3.4	3.4	3.3	3.0	2.6	...a
9	2.0	2.5	2.8	3.2	3.3	3.3	3.5	3.3	3.3	3.2	2.9	2.5	...a
10	...a	2.7	3.0	3.2	3.4	p3.5	...c	3.5	3.3	3.2	2.8	...a	...a
11	2.0	2.5	2.9	...c	3.3	3.3	3.3	3.3	3.2	3.0	2.8	2.3	...a
12	...c	...c	...c	...c	3.3	3.3	3.6	3.3	3.3	3.1	2.8	2.3	...a
13	2.0	2.5	2.8	3.0	3.3	3.3	3.3	3.1	3.3	3.2	2.9	2.5	...a
14	2.0	2.5	2.9	3.0	3.3	3.3	3.5	3.2	3.3	3.1	2.8	2.5	...a
15	2.2	2.5	3.0	3.1	3.3	3.4	...a	3.4	3.3	3.2	2.8	...a	...a
16	2.0	2.5	3.0	3.3	3.3	3.4	3.5	3.5	3.3	3.1	2.8	...a	...a
17	1.9	2.7	3.0	3.2	3.4	3.5	3.5	3.4	3.4	3.2	2.9	2.3	...a
18	...c	...c	2.9	3.2	3.3	3.3	3.4	3.4	3.3	3.1	2.8	2.3	...a
19	2.0	2.5	3.0	3.2	3.4	3.4	3.4	3.4	...c	...c	...c	...c	...c
20	2.0	2.5	2.9	3.1	3.3	3.4	3.4	3.4	3.3	3.2	2.9	2.4	1.6
21	2.1	...c	2.9	3.2	3.4	3.4	3.4	3.5	3.4	3.2	2.9	2.4	1.6
22	2.1	2.6	2.9	3.1	3.4	3.5	3.5	3.5	3.4	3.3	3.0	2.5	1.9
23	2.3	2.7	3.2	3.3	3.4	3.6	3.6	3.6	3.5	3.3	3.0	2.6	1.9
24	2.1	2.7	2.9	2.8	3.4	3.4	3.5	3.5	3.3	3.3	3.0	2.6	2.0
25	1.9	2.5	2.9	3.1	3.3	3.4	3.5	3.5	3.4	3.3	2.9	2.6	2.0
26	2.1	2.6	2.9	3.3	3.5	3.4	...a	3.5	3.4	3.3	3.0	2.5	2.0
27	2.3	2.7	3.0	3.2	3.4	3.4	3.5	3.6	3.5	3.4	3.0	2.7	1.9
28	2.2	2.6	3.0	3.3	3.4	3.5	3.5	3.5	3.5	3.3	3.1	2.7	1.6
29	2.3	2.9	3.0	3.2	3.4	3.5	3.6	3.5	3.5	3.2	3.1	2.7	2.1
30	2.1	2.7	3.0	3.3	3.5	3.6	3.5	3.6	3.5	3.4	3.1	2.7	2.1
31													
MEAN*	2.1	2.6	3.0	3.2	3.3	3.4	3.4	3.4	3.3	3.2	2.9	2.5	1.9

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 219

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1942 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — DECEMBER 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	17	18	19	20	21	22	23	MEAN
1	5.8	5.4	5.2	5.0	4.4	4.2	5.0	5.3	5.4	6.0	6.4	7.2	7.1	7.4	7.5	7.7	7.6	7.8	7.6	7.1	6.8	6.0	4.9	4.6	6.1
2	4.7	5.0	4.6	4.2	4.1	4.1	4.6	5.4	5.7	5.8	5.9	6.5	6.8	6.7	6.8	6.9	6.6	6.5	6.5	6.6	6.5	5.6	5.0	4.7	5.7
3	4.5	4.4	4.0	4.0	4.0	4.4	5.7	...a	7.0	7.1	7.3	8.0	8.1	8.4	8.6	8.7	8.7	9.2	8.6	8.2	6.6	6.1	5.7	5.6	...
4	5.3	5.5	5.0	4.8	4.8	5.3	6.3	7.0	6.3	7.1	7.5	8.1	9.3	9.0	8.2	7.7	...a	8.1	8.6	9.0	7.0	6.5	5.6	5.2	...
5	5.0	4.9	5.2	4.7	4.3	4.0	4.8	5.1	5.4	5.8	6.4	6.5	6.4	6.9	7.0	6.7	6.8	7.0	7.7	7.6	7.0	5.9	5.2	4.8	5.9
6	5.2	5.2	5.1	4.6	4.2	4.7	5.4	5.2	5.8	6.1	6.4	6.6	7.1	7.5	7.8	8.0	8.4	8.4	8.5	8.1	7.5	6.6	6.4	5.8	6.4
7	5.8	5.3	4.6	4.2	3.9	4.0	5.8	6.7	7.0	6.6	7.5	8.1	8.1	8.1	8.6	8.8	9.0	8.9	8.8	7.6	6.6	6.1	5.9	6.0	6.7
8	5.3	5.0	4.5	4.0	3.7	3.4	4.1	5.0	6.6	6.8	8.0	9.3	7.8	8.0	7.9	7.9	7.6	7.9	8.2	8.4	7.5	6.4	5.5	4.8	6.4
9	4.8	4.7	4.5	3.9	3.2	3.3	4.5	4.6	5.3	...c	...c	6.7	7.5	7.5	8.0	8.4	7.4	7.2	7.3	7.4	5.0	4.3	4.5	4.4	...
10	4.5	4.2	3.9	3.5	3.7	3.3	3.8	4.1	4.3	4.9	5.2	5.8	5.8	6.0	6.4	5.8	5.6	5.6	5.7	5.5	5.0	3.9	3.8	4.2	4.8
11	4.1	4.1	...f	3.1	3.0	2.9	3.8	4.4	4.9	5.9	6.4	7.5	8.0	7.5	8.5	8.1	...c	...c	...c	...c	5.4	4.2	4.2	4.0	...
12	...f	2.5	...f	...a	2.8	3.0	4.0	4.5	4.7	5.1	5.3	6.0	6.2	6.4	6.2	6.3	6.4	6.7	7.0	7.4	6.2	5.0	4.6	4.6	...
13	4.4	4.1	3.8	3.5	3.0	3.0	3.9	4.3	5.1	5.4	6.3	6.5	6.4	7.0	7.6	8.0	7.6	7.8	8.0	7.3	6.5	4.8	3.8	3.6	5.5
14	3.7	3.7	3.7	4.0	4.1	3.8	4.7	4.8	5.3	5.9	...c	...c	...c	...c	7.6	7.5	7.0	7.2	7.3	7.7	6.6	5.8	4.9	5.1	...
15	4.9	4.8	4.4	3.8	3.3	3.6	4.2	4.3	4.6	5.0	p5.2c	5.4	6.0	6.0	...c	...c	...c	...c	...c	...c	6.1	5.4	5.0	4.6	...
18	4.4	4.4	3.8	3.3	3.2	3.9	4.8	5.0	5.3	5.3	5.8	5.8	6.4	6.3	6.8	7.0	7.4	7.6	7.3	6.2	5.0	4.6	4.3	4.2	5.3
17	4.2	4.1	3.8	3.8	3.5	4.0	...c	...c	...c	...c	5.4	5.5	5.7	5.7	5.6	6.3	6.5	7.0	6.1	5.6	5.1	4.8	4.5	4.2	...
18	4.2	3.7	3.5	3.5	3.4	3.9	4.6	5.2	5.7	6.0	6.5	7.0	7.1	p7.0	...c	...c	7.1	...c	...c	...c	6.7	5.7	5.0	4.9	...
19	4.6	4.4	4.2	4.0	3.5	4.0	4.9	5.7	6.2	p6.4	6.6	6.5	...c	...c	...c	...c	...c	...c	...c	...c	6.3	5.5	4.9	4.8	...
20	4.6	4.6	4.4	4.4	3.5	3.8	4.7	5.5	6.4	...c	...c	...a	8.7	7.9	9.0	8.9	8.8	8.8	9.2	9.1	8.2	7.0	5.5	4.9	...
21	4.7	4.4	4.2	4.1	3.8	3.9	4.9	5.0	5.0	...c	5.5	5.4	5.8	6.0	6.0	6.0	6.4	7.0	7.3	7.0	6.5	6.7	6.5	6.2	...
22	6.7	6.5	3.8	2.6	2.2	2.8	4.1	4.7	...c	5.7	5.7	6.0	5.4	6.0	6.4	6.3	6.5	7.0	7.1	6.9	6.5	6.5	5.7	5.0	...
23	5.0	4.4	4.2	3.8	3.5	3.9	5.8	6.7	6.5	6.5	6.3	6.3	6.9	7.3	7.9	7.8	8.0	9.0	8.3	7.2	6.7	6.3	6.3	6.7	6.3
24	7.0	7.5	5.0	3.3	2.4	3.0	4.1	4.3	4.9	5.0	5.9	5.8	5.9	5.5	5.8	5.9	5.5	5.6	5.5	5.3	5.6	5.3	5.2	4.9	5.2
25	4.4	4.3	3.6	3.4	3.3	3.4	4.3	4.5	5.6	...c	6.4	7.0	7.2	7.8	8.0	7.5	7.5	6.5	6.3	7.1	7.0	6.5	6.4	6.1	...
26	5.9	4.9	4.1	3.9	3.4	3.2	4.4	5.5	6.2	6.8	7.4	8.0	8.7	7.0	7.4	7.5	7.4	6.2	6.9	6.5	6.9	6.3	5.3	5.5	6.0
27	5.1	5.2	4.3	3.9	3.1	3.1	3.7	4.3	4.6	...c	...c	...c	...c	...c	6.5	...c	...c	...c	6.5	5.6	5.3	4.9	4.5	4.5	...
28	4.4	4.4	4.2	4.0	4.0	4.0	5.0	5.3	5.9	6.0	6.7	7.1	7.8	7.7	8.0	7.9	7.5	6.8	6.6	6.8	6.4	5.0	4.2	4.2	5.8
29	4.2	4.2	...f	...f	4.7	4.1	5.2	5.6	...c	...c	6.5	6.3	6.8	7.1	7.0	7.1	6.6	6.6	6.6	6.5	6.0	5.5	5.3	5.2	...
30	5.0	...f	...f	3.9	...f	3.5	4.5	5.5	6.2	6.0	6.8	7.4	7.7	7.0	6.8	6.7	6.4	7.2	7.2	7.5	6.2	5.3	5.0	5.1	...
31	4.8	4.4	4.3	4.0	3.3	3.4	4.8	5.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.2	6.0	5.4	5.0	...
MEAN*	4.9	4.7	4.3	3.9	3.6	3.7	4.7	5.1	5.6	6.0	6.4	6.8	7.1	7.1	7.3	7.4	7.2	7.3	7.3	7.1	6.4	5.6	5.1	5.0	5.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 220

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1942 | MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS | DECEMBER 1942

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	285	...a	270	250	240	255	220	310	360	360	390	335	350	350	325	330	300	290	260	...a	...a	...a	...a	320	...
2	...a	...a	...a	260	...c	250	240	310	360	395	465	390	380	360	350	335	325	325	270	250	250	280	...a	...a	...
3	...a	270	260	285	270	245	290	...a	...a	330	...c	320	340	320	300	...c	300	275	250	230	225	...a	280	285	...
4	...a	250	260	260	270	250	235	255	255	370	335	350	340	310	330	...a	...a	320	280	240	215	240	250	280	...
5	275	280	255	255	245	250	230	245	360	...a	355	360	380	345	350	365	325	320	280	250	230	...a	...a	...a	...
6	295	...a	245	270	260	250	270	300	275	350	350	370	335	335	325	310	305	275	260	230	225	230	250	275	...
7	250	225	250	250	250	255	250	...a	...a	335	330	325	310	335	325	315	300	285	250	230	...a	265	...a	270	...
8	250	270	275	255	255	235	260	400	325	335	360	290	320	320	310	315	300	300	270	240	...a	235	240	265	...
9	270	260	250	240	260	250	235	230	460	...c	...c	380	335	325	330	290	275	260	220	p235	180	265	275	280	...
10	255	215	270	310	300	480	500	...	...	470	485	440	420	420	330	360	...a	...a	...a	250	...a	285	300	...a	...
11	...a	...a	...a	270	280	300	445	...a	430	...a	350	310	295	320	325	290	...c	...c	...c	...c	230	270	260	270	...
12	...a	...a	...a	...a	290	270	235	415	...a	445	...a	355	350	340	350	345	325	305	280	230	...a	250	240	250	...
13	275	260	240	230	230	260	225	520	390	...a	340	350	...a	...a	325	290	...a	...a	...a	...a	...a	...a	...a	...a	...
14	...a	...a	275	...a	225	230	220	220	340	330	...c	...c	...c	...c	305	300	305	280	280	235	215	245	250	245	...
15	250	240	250	240	260	245	220	450	450	420	...c	435	360	340	...c	...c	...c	...c	...c	...c	230	...a	250	240	...
16	270	...a	...a	...a	...a	...a	245	...a	355	360	335	375	350	365	330	330	300	290	250	220	220	245	245	275	...
17	280	260	...a	250	230	240	...c	...c	...c	...c	440	410	390	375	...a	355	320	280	...a	...a	250	240	300	...a	...
18	250	240	...a	...a	...a	210	...a	290	310	320	330	325	330	p320	...c	...c	300	...c	...c	...c	230	230	...a	...a	...
19	280	275	240	215	240	240	225	300	320	p315	300	355	...c	...c	...c	...c	...c	...c	...c	...c	220	235	260	260	...
20	250	250	250	220	200	230	250	270	...a	...c	...c	...a	320	345	330	300	310	300	260	245	225	...a	...a	250	...
21	265	250	245	255	250	260	240	240	420	...c	430	420	435	410	400	410	350	310	280	...a	...a	280	300	290	...
22	250	230	...a	260	295	290	...a	...a	...c	400	400	345	525	425	385	345	360	325	290	...a	240	250	230	245	...
23	275	250	...c	...c	...c	...c	265	270	300	...a	...a	...a	...a	...a	365	365	340	295	230	235	220	250	305	270	...
24	290	230	220	230	320	300	300	230	420	440	350	390	365	420	410	375	375	340	240	...a	...a	...a	...a	...a	...
25	...a	...a	300	275	...a	250	235	235	325	...c	370	335	360	330	325	320	300	...a	...a	...a	260	240	265	260	...
26	235	220	250	250	235	250	...a	290	355	...a	350	330	310	330	350	315	290	320	280	250	250	250	300	255	...
27	...a	...a	255	255	...a	265	235	440	450	...c	...c	...c	...c	...c	365	340	310	280	250	235	240	250	270	...a	...
28	285	270	...a	275	...a	...a	230	220	340	325	340	350	330	335	320	305	295	300	255	...a	...a	...a	...a	...a	...
29	...a	...a	...a	270	210	250	250	280	...c	...c	350	...a	...a	335	330	...a	300	295	270	250	250	285	280	275	...
30	...a	...a	...a	280	...a	...a	235	300	290	375	345	350	290	340	315	320	345	290	280	230	230	255	270	240	...
31	230	245	...a	...a	250	230	220	270	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	280	255	235	220	250	240	...
MEAN*	265	250	256	256	255	261	259	304	359	371	368	360	355	352	339	330	315	298	264	239	230	252	267	265	295

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY. k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 221

DECEMBER 1942

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1942

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.1	4.5	4.5	4.8	4.8	4.8	4.8	4.8	4.7	4.5	4.1	...
2	...	4.1	4.4	4.6	4.7	4.7	4.8	4.6	4.6	...a	...a	4.1	...
3	...	...a	...a	4.4	4.8	4.8	4.9	4.5	4.8	4.6	4.3	4.1	...
4	...	4.0	...	4.8	...a	4.9	4.9	4.9	4.7	...a	...a	...a	...
5	...	...	...a	...a	4.5	...a	4.6	4.8	4.6	4.7	4.4	...	...
6	3.5	4.1	4.3	4.5	4.7	4.8	4.7	4.7	4.6	4.6	4.4	4.0	...
7	...	...a	...a	4.5	4.6	4.6	4.7	4.6	4.7	4.5	4.3	3.9	...
8	...	4.0	4.2	4.4	4.7	4.6	4.6	4.6	...h	4.7	4.2	4.0	...
9	...	...	4.3	...c	...c	4.6	4.6	4.8	4.5	4.4	4.3	4.0	...
10	3.1	3.5	3.8	4.0	4.1	4.3	4.3	4.3	4.2	4.2	...a	...a	...
11	3.2	...a	...a	...a	4.5	4.6	4.6	4.6	4.5	4.3	...c	...c	...
12	...	3.8	...a	4.2	...a	...a	4.5	4.5	4.4	4.3	4.1	3.9	...
13	...	3.8	4.1	...a	4.4	4.5	...a	...a	...a	4.3	...a	...a	...
14	...	...	4.2	4.3	...c	...c	...c	...c	4.5	4.3	4.1	3.8	...
15	...	3.9	4.1	4.2	p4.2	4.3	4.4	4.4	...c	...c	...c	...c	...
16	...	...	4.1	4.2	4.3	4.4	4.4	4.5	4.4	4.2	4.1	3.9	3.2
17	...	...	...c	...c	4.4	4.4	4.4	4.4	...a	...a	...a	...a	...
18	...	3.6	4.2	4.4	4.5	4.6	4.6	p4.5	...c	...c	4.1	...c	...
19	...	...	4.4	p4.2	4.3	...a	...c	...c	...c	...c	...c	...c	...
20	...	...	...a	...c	...c	...a	...a	4.6	...a	...a	4.2	...	...
21	...	...	4.2	...c	4.4	4.7	4.5	4.5	4.4	4.3	4.2	4.0	...
22	...	...	...c	4.3	4.4	4.5	4.5	4.5	4.4	4.3	4.2	...	...
23	...	...	4.5	...a	...a	...a	...a	...a	...a	...a	4.2	4.0	...
24	...	...	4.1	4.4	4.3	4.5	4.6	4.5	4.4	4.3	4.2	3.9	...
25	...	...	4.3	...c	4.6	...a	4.6	4.6	4.6	4.4	4.3	...a	...
26	...	3.8	5.1	...a	4.7	4.7	4.7	4.8	4.5	4.3	4.3	4.1	...
27	...	3.7	4.1	...c	...c	...c	...c	...c	4.6	4.4	4.2	4.0	...
28	...	...	4.4	4.5	4.5	...a	4.7	4.7	4.5	4.5	4.3	4.0	...
29	...	4.0	...c	...c	4.6	...a	...a	4.6	4.6	...a	4.2	4.0	...
30	...	4.0	4.3	4.4	...a	4.6	4.5	4.7	4.5	4.9	4.9	4.0	...
31	...	...	...c	...c	4.5	...c	...c	...c	...c	...c	...c	...c	...
* MEAN	3.3	3.9	4.3	4.4	4.5	4.6	4.6	4.6	4.5	4.4	4.3	4.0	3.2

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	235	...a	200	235	...h	225	215	235	230	265	250	...
2	...	240	225	260	...a	...a	...a	...a	...a	...a	...a	...a	...
3	...	...a	...a	...a	210	...a	...a	220	...a	...a	...a	260	...
4	...	220	...	...a	...a	...a	250	180	230	...a	...a	...a	...
5	...	...	...a	...a	...a	...a	...a	215	210	...h	...a	...	...
6	240	220	210	200	190	...h	...h	...h	...a	...a	240	230	...
7	...	...a	...a	...a	200	185	185	200	200	210	225	225	...
8	...	...a	250	220	230	220	200	200	...h	...a	...a	220	...
9	...	...	...a	...c	...c	220	250	210	235	...a	...a	220	...
10	250	220	...a	...a	220	...a	225	225	230	210	...a	...a	...
11	265	...a	...a	...a	230	225	...a	215	245	...a	...c	...c	...
12	...	...a	...a	...a	...a	...a	...a	...a	210	235	225	245	...
13	...	245	230	...a	230	230	...a	...a	...a	...h	...a	...a	...
14	...	...	...a	200	...c	...c	...c	...c	...a	...a	240	230	...
15	...	245	245	235	...c	...a	...a	...a	...c	...c	...c	...c	...
16	...	...a	230	225	200	215	210	205	...a	...a	240	230	220
17	...	...	...c	...c	210	225	...a	...a	...a	...a	...a	...a	...
18	...	220	215	220	190	...h	...a	...a	...c	...c	220	...c	...
19	...	...	235	p220	...a	...a	...c	...c	...c	...c	...c	...c	...
20	...	...	...a	...c	...c	...a	...a	...a	...a	...a	...a	...	...
21	...	...	220	...c	...a	190	220	220	230	230	250	...a	...
22	...	...	...c	240	225	...a	...a	...a	...a	...a	...a	...	...
23	...	...	...a	...a	...a	...a	...a	...a	...a	...a	210	280	...
24	...	...	205	...a	...a	195	195	215	230	235	230	240	...
25	...	...	200	...c	230	...a	210	200	230	...a	235	...a	...
26	...	230	260	...a	240	...a	210	...a	230	...a	240	...a	...
27	...	205	230	...c	...c	...c	...c	...c	220	230	230	230	...
28	...	...	230	220	...a	...a	...a	...a	235	220	230	250	...
29	...	230	...c	...c	235	...a	...a	...a	215	...a	...a	...a	...
30	...	250	...a	230	...a	215	220	225	235	...a	220	255	...
31	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	230	...
* MEAN	252	230	227	222	218	212	217	210	226	225	233	240	220

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 222

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1942 | DECEMBER 1942

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.5	0.7	0.8	0.6	0.9	1.0	1.7	1.1	1.0	1.0	0.9	0.7	0.7
2	...c	0.7	0.6	0.7	0.9	0.9	1.0	0.9	0.9	...b	0.7	0.7	0.6
3	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.8	0.9	...c	0.7	0.7	0.6
4	0.6	0.9	0.7	0.7	0.9	0.9	1.0	0.9	1.0	0.8	0.8	0.7	0.6
5	0.6	0.6	0.7	0.8	0.8	0.9	0.7	0.8	0.7	0.8	0.7	0.7	0.7
6	...e	0.7	0.8	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.6
7	0.7	1.0	0.7	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.7	0.7	0.7
8	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.6
9	0.6	0.6	0.8	...c	...c	0.8	0.9	0.7	0.7	0.8	0.6	0.7	...e
10	...e	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7
11	0.6	0.6	0.6	0.7	0.9	0.9	0.8	0.9	0.7	0.7	...c	...c	...c
12	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6
13	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.9	0.8	0.7	0.7	0.6
14	0.6	0.8	0.6	0.9	...c	...c	...c	...c	0.9	0.7	0.7	0.7	0.6
15	0.6	0.6	0.6	0.7	...c	0.6	0.7	0.8	...c	...c	...c	...c	...e
16	0.6	0.6	0.6	0.7	0.8	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.6
17	...c	...c	...c	...c	0.7	0.9	0.8	0.9	0.8	0.9	0.7	0.6	0.6
18	0.6	0.7	0.7	0.7	0.8	0.8	0.9	p0.9	...c	...c	0.7	...c	...c
19	0.6	0.7	0.7	p0.6	0.7	0.9	...c	...c	...c	...c	...c	...c	...c
20	0.6	0.7	...c	...c	...c	0.9	0.9	1.0	1.1	0.9	1.0	0.7	0.7
21	0.6	0.7	0.6	...c	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.8	0.6
22	0.6	0.6	...c	0.6	0.9	0.8	0.9	1.0	0.9	0.8	0.8	0.7	0.6
23	0.6	0.7	0.6	0.7	0.8	0.9	0.9	0.8	0.9	0.7	0.7	0.6	0.6
24	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.8	0.6	0.7	0.6
25	0.6	0.7	1.0	...c	0.9	0.9	0.8	0.9	1.0	0.9	0.7	0.7	0.6
26	0.6	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.0	0.9	0.7	0.7	0.6
27	0.6	0.6	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
28	0.6	0.7	0.7	0.8	0.9	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.7
29	...e	0.7	...c	...c	0.8	0.8	0.7	0.9	0.8	0.7	0.7	0.6	0.6
30	0.6	0.6	0.6	0.6	0.5	0.9	0.8	1.0	0.9	0.8	0.8	0.6	0.6
31	...e	0.6	0.6	0.7	0.7	0.8	0.9	0.6	0.8	0.8	0.7	0.6	0.6
MEAN*	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.1	2.7	3.0	3.3	3.6	3.8	3.7	3.7	3.5	3.4	3.1	2.7	2.0
2	2.0	2.8	3.1	3.3	3.5	3.6	3.7	3.6	3.4	3.4	3.1	2.7	2.1
3	2.2	...a	2.5	3.0	3.7	3.8	3.7	3.6	3.5	3.4	3.1	2.6	...a
4	2.3	2.7	3.0	3.3	3.4	3.8	3.6	3.6	3.5	3.4	3.0	2.6	...a
5	2.2	2.7	3.1	3.3	3.3	...a	...a	...a	3.5	3.4	3.1	2.7	2.0
6	2.2	2.7	3.0	3.3	3.4	3.6	3.6	3.7	3.5	3.4	3.2	2.7	2.1
7	2.1	2.7	3.0	3.1	3.2	3.5	3.4	3.6	3.5	3.3	3.0	2.7	2.0
8	2.1	2.7	2.9	3.1	3.3	3.5	3.4	...a	3.4	...a	3.0	2.5	...a
9	2.1	2.7	3.0	...c	...c	...a	3.5	3.5	3.4	3.2	2.9	2.5	2.3
10	2.0	2.5	2.9	3.1	3.3	3.9	3.3	3.3	3.3	2.5	...a	...a	...a
11	2.0	2.5	2.9	3.1	3.3	3.2	...a	3.1	3.4	2.8	...c	...c	...c
12	2.0	2.6	2.9	3.1	3.2	3.2	...a	...a	3.4	3.3	3.0	2.6	2.0
13	2.0	2.5	3.0	3.2	3.3	3.5	3.5	3.5	3.4	3.3	3.0	2.6	2.0
14	2.1	2.7	2.9	3.3	...c	...c	...c	...c	3.4	3.3	3.0	2.6	2.0
15	2.0	2.5	2.9	3.3	...c	3.4	3.5	3.5	...c	...c	...c	...c	...c
16	1.9	2.5	2.8	...a	3.3	3.4	3.5	3.6	3.3	3.2	2.9	2.4	2.0
17	...c	...c	...c	...c	3.3	3.4	3.5	3.4	3.3	3.2	3.0	2.6	1.9
18	2.1	2.8	3.2	3.5	3.3	3.4	3.5	p3.5	...c	...c	3.0	...c	...c
19	2.0	2.5	2.9	p3.0	3.2	3.4	...c	...c	...c	...c	...c	...c	...c
20	2.2	2.7	3.0	...c	...c	...c	...a	...a	...a	...a	...a	2.7	...a
21	2.0	2.5	2.9	...c	3.0	...a	3.5	3.5	3.4	3.3	3.0	2.7	2.2
22	2.0	2.5	...c	3.1	...a	3.4	3.5	3.5	3.5	3.0	3.1	2.7	2.1
23	2.1	2.5	3.0	3.3	3.3	3.5	3.4	3.5	3.4	3.3	2.8	2.6	2.2
24	2.0	...a	2.7	3.0	3.2	...a	3.5	3.5	3.5	3.3	3.1	2.7	2.2
25	2.1	2.7	3.0	...c	...a	3.3	3.5	...a	3.4	3.3	3.1	2.7	2.2
26	2.0	2.7	2.9	3.0	3.4	3.4	3.5	3.5	3.4	3.3	3.0	2.8	2.2
27	1.9	2.6	3.0	...c	...c	...c	...c	...c	3.7	3.7	3.1	2.8	2.3
28	1.9	2.8	2.7	3.4	3.2	3.4	3.5	3.5	3.5	3.3	3.1	2.7	2.2
29	2.1	2.7	...c	...c	3.3	...a	...a	...a	3.4	3.3	3.1	2.8	2.3
30	2.2	2.5	2.9	3.1	3.2	3.3	3.4	3.6	3.5	3.3	3.1	2.6	2.1
31	2.0	2.7	3.0	...c	3.5	3.5	...c	3.5	3.4	3.3	3.1	2.7	2.2
MEAN*	2.1	2.6	2.9	3.2	3.3	3.5	3.5	3.5	3.4	3.3	3.0	2.6	2.1

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 223

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.9	4.8	4.7	4.2	3.8	3.6	5.1	5.5	5.9	6.5	7.0	6.5	6.5	6.5	6.7	7.0	6.7	6.6	6.7	7.2	7.2	6.3	5.0	4.2	5.8
2	4.2	4.3	4.7	4.8	4.7	4.2	...c	...c	5.5	...c	6.6	7.0	6.8	7.1	7.5	7.3	7.2	7.2	7.0	7.3	6.5	5.4	5.0	5.0	...
3	4.7	4.7	4.5	4.5	4.1	3.4	3.6	...g	...c	...g	4.8	...c	...c	6.0	6.1	6.1	6.2	6.6	5.3	5.8	5.9	5.0	4.8	4.9	...
4	4.6	4.6	4.1	3.3	3.0	3.0	4.0	5.0	5.7	6.2	6.8	7.3	7.4	7.8	7.5	8.1	8.3	7.9	7.3	6.6	5.8	5.2	5.0	5.2	5.8
5	5.3	4.2	3.2	2.5	2.6	2.5	3.6	...g	...g	...g	4.4	5.0	...c	4.7	...c	4.7	4.4	4.7	4.8	4.6	4.9	4.8	4.6	4.3	...
6	4.2	3.9	3.3	3.1	4.6	2.7	3.6	4.1	...a	...a	...c	6.9	...c	6.4	5.8	5.9	6.3	...a	6.8	6.2	5.7	5.6	5.0	...f	...
7	...f	...f	4.0	...a	...f	2.6	3.6	3.9	...a	...a	...a	...a	5.1	5.1	5.0	5.2	5.3	5.5	5.5	4.8	5.0	4.8	4.5	4.5	...
8	...a	...f	...f	3.8	3.3	3.0	4.0	4.5	5.0	...a	5.8	6.1	6.4	6.6	7.2	7.0	7.4	7.6	7.1	6.1	5.0	4.4	3.9	3.9	...
9	3.9	3.7	3.2	3.1	3.0	3.0	4.4	5.0	5.3	5.6	6.0	7.3	8.0	8.5	8.2	7.6	6.4	7.4	8.0	7.3	5.3	3.9	3.5	3.4	5.5
10	3.5	3.5	3.3	...a	2.3	2.5	3.5	4.6	4.3	4.5	4.6	4.8	...a	6.8	6.6	6.0	5.9	5.9	5.9	5.3	5.2	4.9	4.2	4.3	...
11	4.0	3.7	3.4	...a	3.0	3.1	4.2	4.6	4.5	4.9	5.7	6.1	6.5	6.9	6.7	6.6	6.2	6.2	6.2	6.5	6.4	4.8	4.0	4.0	...
12	3.8	3.8	...f	3.7	...a	3.5	4.2	4.4	4.5	4.7	5.5	6.3	7.0	7.1	7.6	6.7	6.2	6.8	6.5	6.5	5.8	4.5	4.2	4.0	...
13	3.9	3.9	4.0	3.6	3.0	3.0	4.4	4.7	5.0	5.7	6.2	6.7	7.6	p7.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	3.6	...
14	3.4	3.3	3.2	3.3	3.1	3.0	4.5	5.6	5.4	...c	...c	...c	...c	7.9	6.7	6.4	6.2	6.3	6.8	6.7	5.9	5.2	4.8	4.3	...
15	3.9	3.7	3.4	3.3	3.1	3.2	4.1	4.9	5.5	5.8	5.9	6.3	6.9	7.5	...c	7.9	7.0	6.6	6.0	6.0	6.0	5.4	p5.3	4.7	...
16	4.4	4.3	3.4	...a	3.3	3.8	4.5	4.8	5.1	...a	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.0	4.8	...
17	4.5	4.4	4.2	3.5	2.6	2.5	4.3	4.6	5.0	...c	...c	...c	...c	...c	...a	5.6	5.3	5.8	5.3	5.1	5.8	5.5	5.4	5.6	...
18	5.0	4.6	4.2	3.3	2.9	2.8	3.6	4.0	4.6	p5.5	5.8	5.8	p6.4	7.4	8.3	7.6	6.5	6.6	6.6	5.4	5.3	5.2	5.2	4.5	5.3
19	5.0	...a	3.0	3.2	3.0	3.3	4.8	4.9	5.0	5.2	5.6	5.9	6.8	6.8	7.9	7.3	6.5	6.3	...c	...c	5.6	...c	4.7	4.3	...
20	...a	...f	...f	...f	3.3	3.3	4.5	4.9	5.1	5.7	5.8	6.0	6.2	6.3	7.4	7.5	8.0	7.2	6.0	5.8	5.8	5.3	5.2	5.3	...
21	...c	4.4	3.5	2.6	2.6	3.0	...c	4.3	5.0	...a	...a	5.1	5.3	6.0	6.1	6.3	6.0	5.0	5.0	5.0	5.9	5.8	5.3	5.0	...
22	4.7	4.1	2.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.6	5.5	4.3	4.4	4.3	...
23	4.0	3.8	3.3	2.9	2.7	2.5	3.6	4.4	4.5	4.8	5.8	6.2	5.8	6.2	6.4	7.0	7.0	6.4	p5.9	...c	...c	...c	5.2	4.9	...
24	4.7	4.8	p4.2	...f	...a	2.6	4.0	...c	5.5	5.9	6.5	...a	...c	...c	...c	...c	...c	6.2	6.0	p5.4	5.9	5.6	5.6	5.8	...
25	5.2	4.8	3.6	3.0	2.7	2.5	4.0	4.8	5.5	6.0	6.5	6.8	6.8	7.8	8.3	7.9	7.3	6.7	6.2	5.4	5.4	5.0	4.5	4.2	5.4
26	4.8	3.5	3.5	3.6	...f	3.3	...c	...c	...c	5.4	5.6	6.1	6.9	8.6	8.8	7.8	7.1	6.0	5.8	6.2	6.0	6.0	5.8	6.0	...
27	5.3	4.1	3.5	3.2	2.8	2.7	3.8	4.4	4.8	5.0	5.6	5.9	6.3	...c	7.2	7.1	6.6	6.2	5.7	5.3	5.5	...c	...c	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.6	...c	...c	...c	...c	7.1	6.7	6.0	7.2	6.1	5.1	4.6	4.5	...
29	4.8	4.2	3.4	3.1	2.9	2.7	3.5	4.0	5.0	5.0	5.1	5.9	5.7	6.2	6.8	8.0	7.2	6.0	5.8	5.8	5.3	4.8	4.5	3.9	5.0
30	4.3	4.5	4.0	3.0	3.3	3.1	4.1	5.6	6.0	...c	6.6	6.4	7.7	9.1	8.6	8.8	9.3	8.9	7.8	5.6	5.6	4.9	4.3	4.1	...
31	3.9	3.5	3.5	3.3	2.7	2.3	4.3	5.2	5.6	5.4	5.7	p6.1	6.4	7.0	7.2	7.0	7.7	7.7	7.0	7.3	6.7	5.0	4.5	4.0	5.4
MEAN*	4.4	4.1	3.7	3.4	3.2	3.0	4.0	4.7	5.1	5.4	5.8	6.2	6.6	7.0	7.2	6.9	6.7	6.6	6.3	6.0	5.8	5.1	4.8	4.5	5.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 224

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1943 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS JANUARY 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	...a	240	...a	210	250	245	295	300	315	310	320	340	330	335	310	320	300	285	255	230	225	230	270	...
2	250	...a	315	275	230	230	...c	...c	315	...c	330	325	370	340	320	315	300	300	280	220	225	260	250	240	...
3	260	275	250	250	220	235	200		...c		485	...c	...c	350	350	325	...c	290	290	260	230	260	270	270	...
4	300	250	215	225	225	230	200	225	300	310	340	340	340	310	330	320	290	260	270	235	230	285	295	265	275
5	230	260	265	330	280	290	350				...	425	...c	...	...c	...	...a	375	320	265	250	270	...a	...a	...
6	...a	...a	...a	...a	290	...a	250	250	...a	...a	300	350	290	320	...a	370	...a	...a	260	235	...a	295	...a	...a	...
7	...a	250	...a	...a	225	230	190	200	...a	...a	...a	...a	...a	460	435	390	...a	330	275	...a	250	260	280	...a	...
8	...a	...a	...a	260	230	250	250	370	345	...a	335	355	335	340	320	315	320	280	265	230	220	240	250	270	...
9	...a	...a	250	270	260	270	275	275	330	360	390	335	335	300	300	300	345	320	270	...a	205	220	...a	...a	...
10	...a	240	245	...a	265	270	...a	290	425	...	520	530	...a	...a	...a	...a	...a	290	270	245	...a	...a	290	...a	...
11	...a	250	270	...a	...a	250	230	270	430	435	...a	350	340	325	...a	300	305	300	220	250	220	225	250	280	...
12	270	275	...a	265	...a	...a	...c	...a	410	450	400	350	...a	...a	310	310	335	285	270	230	220	260	270	295	...
13	...a	285	...a	250	220	260	245	230	220	340	380	340	325	p310	...c	...	...	...	...	...	...	...	...c	255	...
14	230	...a	...a	...a	240	...a	250	245	...a	...c	...	...	...c	300	300	325	330	310	280	235	230	240	235	220	...
15	...a	245	240	280	230	235	...a	300	320	340	350	355	325	350	...c	280	300	270	230	245	235	230	...a	...a	...
16	260	230	...a	...a	...a	...a	230	240	350	...a	...c	...	...	...	...	...	...	...	...	...	...	...	...c	...c	...
17	...c	...c	...c	...c	...c	...c	...a	340	320	...c	...c	...c	...c	...c	...a	340	350	300	210	260	260	285	295	245	...
18	260	240	250	240	270	290	230	300	430	p375	340	430	p375	350	290	280	295	320	...a	...a	...a	300	250	...a	...
19	...a	...a	270	265	250	250	235	220	270	425	375	400	335	...a	325	295	310	290	...c	...c	...c	...c	270	...a	...
20	...a	...a	...a	...a	...a	235	250	220	220	325	360	390	355	400	335	330	310	270	280	230	250	280	275	...a	...
21	...c	275	275	260	300	270	260	510	300	...a	...a	430	480	375	...a	320	...a	290	...a	...a	...a	...a	260	240	...
22	280	225	260	...c	...c	...c	...c	...c	...c	...	...	...	...	...	...	...	...	...c	...c	245	230	255	265	250	...
23	260	275	290	...a	270	270	320	330	520	490	360	340	430	350	340	315	290	275	p240	...c	...c	...c	...a	...a	...
24	275	270	...a	...a	...a	260	250	...c	...a	370	320	...a	345	335	300	...c	...c	290	250	...a	...a	280	280	240	...
25	255	210	255	240	240	230	240	235	250	300	...a	350	395	345	300	300	280	280	250	...a	255	265	260	315	...
26	215	200	250	...a	...a	...c	...c	...c	...c	330	400	380	395	325	300	310	280	280	310	240	270	255	290	...a	...
27	225	230	255	260	245	255	240	230	220	420	355	350	360	330	310	295	290	290	225	250	240	...c	...c	...c	...
28	...c	...	...	...	...	...	...	...	...c	...c	...c	330	...c	...c	...c	...c	290	280	225	255	225	220	250	280	...
29	...a	...a	...a	240	230	220	240	...c	240	230	390	360	...a	370	360	290	275	285	275	230	220	245	250	275	...
30	275	230	220	230	240	265	240	265	300	...c	290	...a	350	325	310	310	270	270	230	225	...a	250	250	260	...
31	250	280	255	230	...a	...a	235	235	260	330	385	300	390	330	335	325	290	...a	265	235	210	215	...a	290	...
MEAN*	256	250	256	257	246	252	246	276	322	361	367	367	360	342	325	315	304	293	262	242	234	255	264	264	288

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 225

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1943 JANUARY 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	3.9	4.1	4.3	4.5	4.5	4.7	4.5	4.5	4.3	4.3	4.0	3.4
2	...	...	4.2	...c	4.5	...a	...a	...a	...a	...a	4.2	3.9	...
3	...	4.0	...c	4.0	4.2	...c	...c	...c	...c	4.3	4.1	3.8	...
4	...	...	4.2	4.4	4.4	4.5	4.5	4.4	4.5	4.3	4.1	3.8	...
5	3.0	3.9	3.6	4.0	4.0	4.0	...c	4.2	...c	4.0	...a	3.7	3.3
6	...	...	...a	...a	4.3	4.5	...a	...a	...a	...a	...a	...a	...
7	...	...	...a	...a	...a	...a	...a	4.3	4.3	4.3	...a	...a	...
8	...	3.7	...a	...a	...a	...a	4.5	...a	4.4	4.3	4.1	3.9	...
9	...	3.8	4.1	4.3	4.4	4.5	...a	...a	4.4	4.3	4.2	3.9	...
10	...	3.6	3.9	4.2	4.3	4.4	...a	...a	...a	...a	...a	3.9	...
11	...	3.7	4.2	4.2	...a	4.4	4.5	...a	...a	4.3	4.2	4.0	...
12	...	...	4.0	4.2	4.3	...a	...a	...a	4.3	4.3	4.1	3.8	...
13	...	...	...	4.3	4.6	...a	...a	p4.5	...c	...c	...c	...c	...
14	...	...	...	...c	...c	...c	...c	4.4	...a	4.2	4.2	3.9	3.5
15	...	3.6	4.0	4.3	4.5	4.5	4.4	4.5	...c	4.4	4.2	3.9	...
16	...	...	...a	...a	...c	...c	...c	...c	...c	...c	...c	...c	...
17	...	3.8	4.1	...c	...c	...c	...c	...c	...a	4.2	...a	3.9	...
18	...	...	4.1	p4.3	4.5	4.6	p4.5	4.4	4.4	4.3	4.2	...a	...
19	...	...	3.9	4.3	4.3	4.5	4.4	...a	4.4	4.3	4.1	4.0	...
20	...	...	...a	4.2	4.5	4.6	4.5	4.5	4.5	4.3	...a	3.9	...
21	...	3.7	4.1	...a	...a	4.4	4.3	4.3	...a	4.2	...a	...	...
22	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
23	3.0	3.6	4.1	4.4	4.4	4.5	4.5	4.5	4.4	4.3	4.2	3.8	...
24	...	...c	...a	...c	...c	...c	...c	...c	...c	...c	...c	4.0	...
25	...	...	4.2	4.4	...a	4.5	4.5	4.5	4.5	4.3	4.2	4.0	...
26	...	...c	...c	4.4	4.4	4.5	4.6	4.5	4.5	4.4	4.2	4.0	3.6
27	...	...	...	4.3	4.4	4.4	...a	4.5	4.4	4.4	4.3	3.9	...
28	...	...	...c	...c	...c	...c	...c	...c	...c	...c	4.1	4.0	...
29	...	...	...	...	...a	4.5	...a	4.4	4.4	4.3	4.2	4.0	...
30	...	...	...	...a	...c	4.3	...a	...a	...a	4.3	4.1	4.0	...
31	...	...	4.0	4.2	4.5	5.0	4.5	4.4	4.4	4.3	4.1	...a	...
* MEAN	3.0	3.8	4.0	4.3	4.4	4.5	4.5	4.4	4.4	4.3	4.2	3.9	3.4

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	230	225	200	...a	...a	...c	225	215	235	...a	...a	...a
2	...	...	215	...c	220	...a	...a	...a	...a	...a	...a	...a	...
3	...	220	...c	210	...c	...c	...c	...c	...c	260	...c	250	...
4	...	...	200	250	250	...a	...a	...a	250	...a	230	210	...
5	220	200	200	...a	190	...c	...c	250	...c	250	...a	230	250
6	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
7	...	...	...a	...a	...a	...a	...a	200	225	255	...a	...a	...
8	...	250	...a	...a	...a	...a	200	...a	240	220	220	235	...
9	...	225	200	190	220	235	...a	...a	...a	...a	220	230	...
10	...	240	225	220	200	275	...a	...a	...a	...a	...a	...a	...
11	...	215	215	235	...a	...a	...a	...a	...a	...a	225	240	...
12	...	...	225	225	220	...a	...a	...a	230	240	...a	...a	...
13	...	...	...	215	250	...a	...a	...a	...c	...c	...c	...c	...
14	...	...	...a	...c	...c	...c	...c	...a	...a	200	215	225	230
15	...	220	220	215	200	215	180	210	...c	210	...a	230	...
16	...	...	...a	...a	...c	...c	...c	...c	...c	...c	...c	...c	...
17	...	220	200	...c	...c	...c	...c	...c	...a	...a	...a	235	...
18	...	...	210	p200	235	220	...a	...a	...a	225	...a	...a	...
19	...	...	220	...h	...a	...a	...h	...a	...a	220	220	225	...
20	...	...	...	200	190	200	...a	215	...a	250	...a	...a	...
21	...	230	230	...a	...a	240	...a	...a	...a	...a	...a	...	...
22	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
23	230	230	220	215	185	...a	220	215	235	...a	...a	...a	...
24	...	...	...a	...c	...c	...c	...c	...c	...c	...c	...c	230	...
25	...	...	230	...a	...a	...a	200	190	...h	230	230	215	...
26	...	...	...c	...a	210	200	220	195	210	...a	210	225	225
27	...	...	...	200	210	200	...a	210	...c	225	...a	...a	...
28	...	...	...c	...c	...c	...c	...c	...c	...c	...c	230	225	...
29	...	...	...	...	...a	...c	...a	...a	225	200	220	...a	...
30	...	...	...a	...c	...a	...a	...a	...a	...a	...a	...a	240	...
31	...	...	220	210	235	200	220	220	200	190	...a	...a	...
* MEAN	225	225	216	213	215	221	207	213	226	227	222	230	235

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 226

JANUARY 1943 | JANUARY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.5	0.6	0.5	0.7	0.7	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.6
2	...c	...c	0.7	...c	0.7	0.6	0.8	0.8	0.9	0.9	0.8	0.7	0.7
3	0.7	0.7	...c	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6
4	...e	0.9	0.7	0.8	0.7	0.8	0.9	0.8	1.0	0.8	0.7	0.7	0.6
5	...e	0.7	0.7	0.7	0.8	...c	...c	...c	...c	...c	...c	...c	...c
6	...c	...c	...c	...c	...c	...c	...c	...c	0.8	0.8	0.8	0.7	0.6
7	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.6
8	0.6	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.9	0.8	0.6	0.6	0.6
9	...e	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.8	0.8	0.7	0.7	0.6
10	0.6	0.6	0.7	0.9	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7
11	0.5	0.8	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7
12	...e	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6
13	...e	0.6	0.7	0.7	0.8	0.8	0.9	...c	...c	...c	...c	...c	...c
14	0.6	0.6	0.7	...c	...c	...c	...c	0.8	0.8	0.7	0.7	0.6	0.6
15	0.7	0.8	0.6	0.7	0.7	0.9	0.8	0.8	...c	0.7	0.6	0.6	...e
16	...e	0.7	0.6	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...c
17	...c	...c	...c	...c	...c	...c	...c	...c	0.8	0.8	0.7	0.6	...e
18	0.6	0.8	0.7	p0.8	0.7	0.8	p0.7	0.7	0.7	0.7	0.6	0.7	0.7
19	...e	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	...c
20	0.6	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6
21	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
23	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	1.0	0.7	0.7	0.6
24	0.7	...c	0.8	0.8	0.8	0.8	...c	...c	...c	...c	...c	0.7	0.5
25	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.9	0.7	0.7	0.6	0.5
26	...c	...c	...c	0.8	0.7	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.6
27	...e	0.8	0.8	...c	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
28	...c	...c	...c	0.8	...c	0.8	...c	...c	...c	...c	0.7	0.6	0.6
29	...e	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.6
30	0.5	0.6	0.6	...c	0.7	0.7	0.9	0.8	0.7	0.8	0.7	0.6	0.6
31	...e	0.7	0.8	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.6	...e
MEAN*	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.1	2.6	2.9	3.3	3.5	3.5	3.6	3.7	3.5	3.3	3.1	2.7	2.2
2	...c	...c	3.0	...c	3.3	3.3	3.5	3.5	3.4	3.2	3.0	2.7	1.8
3	1.9	2.6	...c	3.2	3.3	2.9	3.5	3.5	3.4	3.3	3.0	2.6	1.9
4	1.8	2.3	2.7	3.3	3.3	3.3	3.5	3.5	3.4	3.2	3.0	2.6	2.1
5	1.9	2.4	2.8	2.9	3.2	...c	...a	3.5	3.3	...a	3.0	2.6	2.1
6	1.9	2.5	2.8	...c	...c	...c	...c	...c	...a	...a	2.7	2.7	2.1
7	1.9	2.4	2.8	3.0	3.1	3.2	3.2	...a	3.0	2.7	3.0	2.7	2.2
8	2.0	2.4	2.9	3.1	3.1	...a	...a	...a	...a	3.4	...a	2.7	...a
9	2.0	2.5	2.9	...a	...a	3.5	...a	3.5	3.3	3.2	3.1	2.7	2.1
10	...a	2.3	2.7	...a	...a	3.3	3.4	3.4	3.3	3.2	3.1	2.8	2.3
11	2.0	2.5	2.5	3.3	3.3	3.4	3.5	3.4	3.3	3.3	3.0	2.7	2.2
12	...a	...a	2.6	...a	3.3	3.3	3.2	3.3	3.3	3.3	3.0	2.7	2.3
13	2.0	2.4	2.8	3.2	3.3	...c	...a	...a	...c	...c	...c	...c	...c
14	2.0	2.5	3.0	...c	...c	...c	...c	3.4	...a	...a	3.0	2.7	2.2
15	...a	...a	3.1	...a	3.3	3.5	3.5	3.4	...c	3.2	3.0	2.7	2.2
16	2.2	2.5	3.0	3.1	...c	...c	...c	...c	...c	...c	...c	...c	...c
17	...c	2.5	3.0	2.8	2.8	...c	...c	...c	3.3	3.3	3.0	2.6	2.2
18	...a	2.3	2.8	p3.1	3.3	...a	p3.4	3.5	3.4	3.3	3.1	2.7	2.1
19	1.9	2.6	2.7	3.0	3.1	3.4	3.4	3.4	3.1	...a	2.9	...c	...c
20	1.5	2.4	...a	...a	3.3	3.5	3.5	3.6	3.5	3.3	3.2	2.8	2.2
21	1.9	2.2	2.6	3.0	3.1	3.4	3.4	3.4	3.4	3.2	3.0	...c	2.1
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
23	1.9	2.3	2.7	3.1	3.1	3.2	3.2	3.4	3.5	3.3	3.0	2.7	2.1
24	...a	...c	2.9	3.3	3.5	3.5	3.6	3.4	...a	...c	...c	2.8	2.2
25	1.7	2.4	2.7	3.1	3.3	3.3	...a	...a	3.3	3.3	2.9	2.8	2.2
26	...c	...c	...c	3.2	3.2	3.1	...a	...a	...a	...a	...a	2.7	2.3
27	1.8	2.2	2.9	2.9	2.8	3.4	3.4	3.4	3.3	3.3	3.1	2.7	2.3
28	...c	...c	...c	3.1	...c	3.4	...c	...c	...c	...c	2.8	2.9	2.2
29	1.8	2.4	2.7	3.0	3.3	3.3	3.3	3.4	...a	3.3	3.1	2.7	2.0
30	1.8	2.3	2.8	...c	3.2	3.3	3.3	3.3	...a	3.1	...a	2.7	...a
31	1.8	2.4	2.9	2.9	3.4	3.4	3.5	3.4	3.4	...a	...a	...a	2.0
MEAN*	1.9	2.4	2.8	3.1	3.2	3.3	3.4	3.4	3.3	3.2	3.0	2.7	2.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF_2 EQUAL TO OR LESS THAN f^oF_1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 227

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.0	4.0	4.0	p3.6a	3.3	3.0	4.2	5.3	5.2	5.8	5.5	6.3	7.2	7.5	6.0	7.0	7.0	7.7	7.5	6.4	5.2	4.4	4.0	3.9	5.3
2	3.6	3.5	3.4	2.8	2.5	2.5	3.7	4.5	4.9	5.3	5.0	5.3	5.4	5.8	6.4	6.3	5.7	5.9	6.0	5.6	4.8	4.2	3.9	3.5	4.6
3	3.3	3.4	3.4	3.3	2.9	2.8	3.5	4.8	6.0	p5.8c	5.5	5.7	6.5	6.6	6.8	6.6	6.7	5.5	4.8	5.4	5.5	4.2	3.7	3.8	4.8
4	3.6	4.0	2.8	2.4	2.0	2.3	3.8	4.3	4.6	4.4	5.3	5.8	5.3	6.0	7.0	6.7	5.9	6.0	5.3	5.1	5.7	4.6	4.4	4.0	4.6
5	4.0	3.7	3.5	3.1	2.9	2.3	3.0	3.7	4.1	4.3	4.8	5.6	5.4	5.3	6.0	5.5	5.4	5.3	4.8	4.6	4.8	4.0	3.8	4.2	4.3
6	4.0	4.2	3.5	2.4	2.1	2.0	3.2	3.9	4.7	5.1	5.7	5.5	5.1	p5.2	p5.0	4.9	4.7	4.6	5.0	5.3	5.8	4.8	3.6	3.5	4.3
7	3.6	3.4	3.1	2.7	2.5	2.5	3.3	4.5	4.9	...c	6.4	7.1	7.0	7.1	6.6	7.1	6.5	5.8	5.8	5.8	4.9	4.0	3.8	3.7	...
8	3.8	3.7	3.7	3.0	2.5	2.6	4.0	5.2	5.2	5.0	5.4	6.4	7.8	7.8	7.5	6.9	6.3	p5.6	5.6	5.6	5.3	4.6	4.3	3.9	5.1
9	3.9	4.0	3.6	3.3	2.7	2.5	3.6	5.0	5.7	6.0	6.2	6.0	6.6	7.2	7.7	7.9	7.3	6.8	6.6	7.1	6.0	4.6	4.1	4.0	5.4
10	3.8	3.6	3.6	3.4	3.4	3.0	4.1	4.5	4.7	4.8	5.2	5.7	5.5	6.0	6.6	6.7	6.6	6.6	6.5	5.6	5.4	4.4	4.1	4.0	4.9
11	4.0	3.8	3.8	3.6	3.6	3.5	4.2	5.0	5.5	5.7	6.3	6.1	6.6	7.2	7.0	7.5	8.1	6.9	7.0	5.5	4.6	4.1	4.2	4.2	5.3
12	4.3	4.3	3.7	2.5	2.5	2.9	4.1	5.6	6.2	6.2	6.9	6.9	7.0	7.2	7.5	7.1	6.6	6.1	6.2	6.0	5.9	5.5	5.0	5.0	5.5
13	5.0	4.0	3.5	3.3	3.1	3.1	4.1	4.7	5.6	5.4	5.5	5.6	6.0	6.2	7.0	7.1	7.3	6.3	6.7	6.4	5.0	4.9	4.8	4.6	5.2
14	4.5	4.6	3.8	3.6	3.3	3.2	3.9	5.0	5.5	5.9	6.1	6.1	6.5	6.7	7.1	7.0	7.1	6.5	6.1	6.0	5.8	4.8	4.7	4.5	5.4
15	4.6	4.4	3.6	3.4	3.1	2.9	3.8	4.7	5.7	5.7	5.9	6.1	6.2	6.5	6.3	6.6	7.2	7.2	8.4	7.2	6.0	3.9	3.8	3.6	5.3
16	3.5	3.5	3.4	3.4	3.2	3.1	3.9	4.6	5.2	5.5	5.5	5.7	6.6	6.6	6.2	6.1	6.1	6.0	6.5	7.0	6.2	4.3	3.8	4.0	5.0
17	3.8	3.6	3.3	3.1	2.9	2.8	3.8	5.1	5.7	5.6	6.4	6.7	7.3	7.9	9.8	9.3	9.1	9.0	9.4	8.5	8.0	5.7	6.3	6.3	6.2
18	5.8	4.8	2.8	2.4	2.1	2.1	2.9	4.0	4.7	5.6	6.1	p6.2c	6.2	6.9	p7.4c	7.9	7.4	6.6	6.6	5.5	5.2	4.5	4.1	4.1	5.1
19	4.0	3.7	3.4	3.0	2.4	2.7	3.7	5.2	p5.5c	5.8	6.0	6.7	6.7	7.4	...c	6.6	6.7	6.7	6.3	6.7	6.2	5.6	5.4	4.6	...
20	4.3	4.0	4.2	3.7	3.2	3.3	4.0	5.7	5.9	6.1	5.7	5.9	6.8	7.4	7.5	7.7	7.7	7.0	6.6	6.3	6.0	5.2	4.5	4.2	5.5
21	4.0	3.9	3.9	3.8	3.8	3.4	4.2	5.0	5.6	5.2	5.9	6.5	6.0	6.4	6.5	7.5	7.5	7.3	7.1	6.6	5.2	3.5	3.3	3.3	5.2
22	3.3	3.2	3.3	3.6	3.4	3.4	4.3	5.0	4.9	4.7	5.2	6.0	6.9	7.6	7.7	8.1	8.0	6.6	6.0	5.7	5.8	5.0	4.4	4.2	5.3
23	4.0	3.8	4.3	3.5	3.1	2.9	3.9	5.1	5.5	...c	6.0	6.5	7.1	8.3	7.9	7.9	7.8	7.0	6.9	7.0	5.5	4.7	4.2	4.1	...
24	4.0	3.8	3.7	3.6	3.1	2.6	3.6	4.4	4.8	5.2	5.5	p5.6	6.5	6.8	7.9	8.3	8.0	7.2	6.0	5.8	5.4	4.4	4.3	4.5	5.2
25	4.6	4.2	3.9	3.6	3.1	3.0	3.9	4.9	5.7	6.7	6.5	7.2	7.5	7.6	7.6	8.0	7.9	7.8	7.7	7.8	6.2	4.8	4.5	4.2	5.8
26	3.9	3.8	3.7	3.5	3.5	3.4	3.4	4.2	4.5	4.6	4.9	5.2	4.9	4.9	4.9	5.0	4.4	4.6	4.5	4.4	4.4	3.2	2.5	...f	...
27	...f	...a	2.5	2.0	2.2	2.0	4.0	5.5	5.2	6.0	7.2	8.5	8.0	8.7	8.1	7.6	6.7	6.4	6.7	6.4	5.4	4.9	...f	...f	...
28	2.7	...f	...f	...f	...f	2.0	3.2	4.4	4.9	5.2	5.2	5.5	6.3	7.0	7.4	7.1	6.4	6.2	6.5	6.3	5.1	4.2	3.6	3.0	...
29																									
30																									
31																									
MEAN*	4.0	3.9	3.5	3.2	2.9	2.8	3.8	4.8	5.2	5.4	5.8	6.2	6.5	6.8	7.0	7.1	6.9	6.5	6.4	6.1	5.6	4.5	4.2	4.1	5.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = $f^{o}F2$ EQUAL TO OR LESS THAN $f^{o}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 228

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1943 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS FEBRUARY 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	...a	...a	...a	...c	...c	270	260	230	300	380	360	325	315	330	320	300	270	245	215	225	250	260	...a	...
2	280	230	...a	...a	225	240	240	320	350	325	430	405	...a	375	320	320	320	300	280	220	220	240	260	260	...
3	265	250	260	...a	...a	...a	...a	340	300	...c	390	400	340	360	330	330	300	310	320	260	215	225	265	275	...
4	290	230	225	...a	250	...a	310	375	395	...	375	320	...	365	330	290	320	255	250	250	240	...a	275	280	...
5	260	245	245	270	270	260	225	...a	500	...	430	340	370	420	320	350	310	310	230	250	...a	...a	...a	...a	...
6	240	270	230	260	265	280	250	...a	390	390	350	390	410	p390	p400	400	390	375	315	245	230	220	280	...a	...
7	...a	275	...a	275	265	260	260	230	375	...c	...c	...c	...c	...c	350	310	300	300	275	235	210	245	255	280	...
8	...c	...c	...c	...c	...c	...c	240	...a	280	290	460	340	310	315	295	280	275	...a	...a	...a	240	240	250	...a	...
9	270	225	270	240	220	265	260	295	290	275	300	350	335	345	310	300	285	280	275	230	210	...a	250	245	...
10	270	...a	225	230	...a	...c	215	225	350	...a	380	340	390	350	350	320	295	270	250	220	230	230	250	260	...
11	...a	270	250	260	225	...a	235	220	275	340	320	325	340	320	340	325	295	220	240	210	235	250	265	270	...
12	280	230	205	...a	270	235	250	290	280	330	305	315	330	335	290	300	280	245	235	235	240	240	255	275	...
13	230	230	250	260	...c	270	240	225	250	310	345	400	340	380	...a	320	285	290	245	220	220	260	270	280	...
14	260	230	245	250	250	...a	250	280	270	320	310	305	330	355	305	320	280	260	255	230	225	240	275	280	...
15	260	220	260	260	...a	235	220	200	280	310	315	355	350	335	340	320	300	300	245	235	220	...a	250	250	...
16	...a	270	265	270	245	230	240	300	300	310	350	360	320	315	300	300	310	...a	...a	240	...a	225	280	270	...
17	275	...a	230	...a	...a	...a	250	230	295	370	330	350	350	390	320	300	310	290	260	240	215	...a	270	270	...
18	260	230	240	270	230	275	275	225	335	300	325	...c	...a	360	...c	300	275	230	210	220	240	250	260	270	...
19	270	235	250	220	240	260	230	250	...c	325	330	340	335	320	...c	315	290	...a	...a	...a	...a	250	210	250	...
20	255	270	240	235	...a	250	235	245	285	290	350	395	320	315	300	300	270	275	255	240	225	220	240	245	...
21	255	290	255	250	...a	260	235	230	300	330	330	290	340	310	350	305	280	270	235	220	205	230	270	280	...
22	...a	275	275	245	275	...a	...a	230	205	200	400	340	335	295	310	295	275	260	245	...a	230	...a	...a	290	...
23	265	305	260	250	...a	240	230	235	235	...c	...a	345	345	300	300	300	280	...a	260	210	215	240	255	260	...
24	250	260	270	230	230	245	240	220	365	330	360	p330	330	360	335	290	290	250	250	235	220	245	295	270	279
25	250	240	230	...a	210	260	250	240	290	275	325	310	310	300	310	295	290	265	250	220	210	245	240	245	...
26	290	280	240	...a	...a	270	...a	250	235	500	495	445	...	500	460	390	460	365	260	270	270	270	...a	...a	...
27	...a	...a	280	340	...a	310	250	235	220	220	325	330	320	315	315	300	300	...a	250	230	220	240	270	275	...
28	270	260	270	270	...a	295	270	250	330	420	380	390	350	320	300	290	295	250	245	...a	210	235	250	255	...
29																									
30																									
31																									
MEAN*	264	253	249	257	245	260	247	256	304	321	361	353	340	347	368	314	302	280	255	232	225	240	260	267	283

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 229

FEBRUARY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.2	4.3	4.4	4.5	4.5	4.4	4.3	4.1	3.9	3.2
2	...	3.5	4.0	4.1	4.3	...a	...a	4.4	4.3	4.2	4.1	3.8	3.5
3	...	3.7	3.9	...c	4.3	4.3	4.3	4.4	4.4	4.2	4.1	3.8	3.0
4	...	3.5	3.9	4.0	4.1	4.3	4.4	4.4	4.4	4.3	4.1	3.7	...
5	...	...	3.8	4.0	4.1	4.2	4.4	4.3	4.3	4.2	4.0	3.8	...
6	...	...	...	4.0	4.1	4.2	4.3	p4.3	p4.2	4.1	4.0	3.8	3.2
7	...	...	4.0	...c	...c	...c	...c	...c	4.5	4.2	4.0	...	...
8	...	...	4.0	4.3	4.4	4.4	4.4	4.4	...a	...a	4.1	...a	...
9	...	...	4.1	4.3	4.4	4.5	4.5	4.6	4.4	...a	...a	3.9	...
10	...	...	4.0	...	4.5	4.5	4.5	4.4	4.5	4.4	4.0	...a	...
11	...	...	4.0	4.4	4.3	4.5	4.6	4.5	4.4	4.4	4.2	...	...
12	...	...	4.0	4.5	...a	...a	4.5	4.5	4.5	4.4	4.3	...	...
13	...	...	...	4.5	4.5	4.5	4.5	4.4	...a	4.3	4.2	4.0	...
14	...	3.4	4.0	4.4	4.5	4.5	4.5	4.8	4.4	4.3	4.2	3.9	...
15	...	...	4.2	...a	4.5	4.5	4.6	4.5	4.6	4.4	4.3	3.8	...
16	...	3.7	4.0	4.3	4.5	4.6	4.5	4.6	4.5	...a	...a	...a	...
17	...	...	4.1	4.4	4.5	4.5	4.6	4.5	...a	...a	4.2	...	...
18	...	...	4.0	4.3	...a	...c	...a	4.9	...c	4.4	4.2	...	...
19	...	...	...c	4.3	4.4	4.7	4.5	4.5	...c	4.3	4.2	...a	...
20	...	...	4.0	4.3	4.4	4.6	4.5	4.4	4.4	4.3	4.1	3.8	...
21	...	...	4.1	4.3	4.3	4.6	4.6	4.6	4.2	4.3	4.3	3.8	...
22	...	...	...	...	4.5	4.5	4.6	4.3	4.6	4.3	4.1	3.7	...
23	...	...	...	...c	...a	4.6	4.7	4.6	4.5	...a	...a	...	...
24	...	...	4.1	4.2	4.4	p4.3	4.7	...c	...a	4.4	4.3	...	...
25	...	...	4.1	4.5	4.6	4.7	4.7	4.6	4.7	4.4	4.3	3.9	...
26	...	...	...	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.1	3.9	...
27	...	...	...	...	...a	...a	4.7	...a	4.7	4.5	...	...	...
28	...	...	4.0	4.2	4.3	4.5	4.7	4.6	4.5	...b	4.3	...	...
29													
30													
31													
* MEAN	...	3.6	4.0	4.3	4.4	4.5	4.5	4.5	4.4	4.3	4.2	3.8	3.2

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	205	...a	220	...a	180	215	230	220	215	220
2	...	...a	...a	200	...a	...a	...a	200	230	220	230	220	240
3	...	...a	...a	...c	195	190	200	190	260	245	230	230	230
4	...	235	215	185	...a	200	200	220	...a	240	220	230	...
5	...	...	220	200	220	190	220	215	240	230	235	235	...
6	...	...	...	230	220	190	...a	...a	p230	...a	230	220	230
7	...	...	220	...c	...c	...c	...c	...c	200	225	220	...	...
8	...	...	235	220	200	200	180	230	...a	...a	...a	...	...
9	...	...	250	...a	...a	210	...a	220	215	...a	...a	...a	...
10	...	...	235	...	...a	220	220	210	210	225	...a	...a	...
11	...	...	250	215	210	...a	...a	...a	225	225	230	...	...
12	...	...	...a	...a	...a	...a	200	230	240	...a	...a	...	...
13	...	...	...	240	220	205	...a	...a	...a	210	200	250	...
14	...	200	...h	225	245	225	210	...a	220	220	235	...a	...
15	...	...	230	...a	225	200	...a	200	...a	230	...a	230	...
16	...	240	...a	...a	...a	...a	190	...a	...a	...a	...a	...a	...
17	...	...	240	220	220	210	200	...a	...a	...a	...a	...	...
18	...	...	240	...a	...a	...c	...a	235	...c	235	235	...	...
19	...	...	...c	...a	215	200	210	200	...c	220	...a	...a	...
20	...	...	240	230	...a	210	220	...a	190	200	220	230	...
21	...	...	225	210	210	235	215	210	...a	230	225	240	...
22	...	...	...	...	210	260	260	215	...a	...a	...a	...a	...
23	...	...	...	...c	...a	200	180	220	215	...a	...a	...	...
24	...	...	230	220	225	...c	...c	...c	...a	220	240	...	...
25	...	...	230	...c	...a	200	...a	220	245	...a	230	225	...
26	...	...	...	220	...a	...a	...c	235	230	250	245	235	...
27	...	...	...	...	...a	...a	240	...a	...a	...a	...	...	...
28	...	...	240	...a	235	...a	...a	215	215	...b	230	...	...
29													
30													
31													
* MEAN	...	225	233	216	218	209	210	214	224	227	228	230	230

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 230

FEBRUARY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.5
2	...e	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6
3	...e	0.6	0.6	...c	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.6
4	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6
5	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	...e
6	...e	0.6	0.7	0.8	0.8	0.8	0.8	p0.8	p0.8	0.8	0.8	0.6	0.6
7	...e	0.6	0.6	...c	...c	...c	...c	...c	0.7	0.7	0.8	0.6	...e
8	...e	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.6	0.6	...e
9	...e	0.6	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.6	...e	...e
10	...e	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.7	0.8	0.6	0.5
11	...e	0.6	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6	...e
12	...e	0.5	0.6	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.6	0.5	...e
13	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	...e
14	...e	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.6	0.6	0.6	0.6
15	...e	0.6	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	...e
16	...e	0.5	0.7	0.7	0.8	0.8	0.9	0.8	0.7	0.6	0.8	0.7	...e
17	...e	0.6	0.7	0.8	0.8	0.9	1.0	1.0	0.8	0.8	0.8	0.8	0.6
18	...e	0.6	0.6	0.8	0.9	...c	0.8	0.8	...c	0.6	0.7	0.7	...e
19	0.5	0.9	...c	0.8	0.9	0.8	0.9	1.0	0.8	...c	0.8	0.8	0.7
20	...e	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6
21	...e	0.7	0.8	0.8	1.0	0.9	1.0	0.8	1.1	0.8	0.8	0.6	...e
22	...e	0.8	0.8	0.9	1.1	0.8	0.9	0.9	1.0	0.8	0.8	0.7	0.7
23	...e	0.8	0.8	...c	0.9	0.9	0.9	0.8	1.0	1.0	0.7	0.6	0.5
24	0.5	0.7	0.8	1.0	1.1	...c	...c	...c	...c	0.8	0.8	0.7	0.5
25	0.5	0.7	0.7	...c	1.0	1.0	1.1	1.0	1.0	1.0	0.7	0.7	0.6
26	...e	0.9	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.0	0.7	0.6	...e
27	...e	0.6	0.8	0.8	1.4	1.1	1.1	1.1	1.0	1.0	1.0	0.8	...c
28	0.6	0.6	0.6	1.0	1.0	1.0	...b	1.0	1.0	...b	0.6	0.6	...e
29													
30													
31													
MEAN*	0.5	0.7	0.7	0.8	0.9	0.9	0.9	0.9	1.0	0.8	0.7	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.7	2.2	2.6	2.7	2.8	...a	...a	3.4	3.3	3.3	3.0	2.6	2.0
2	1.4	2.2	2.6	2.7	...a	...a	...a	3.5	...a	3.2	2.5	2.6	2.2
3	1.7	2.2	2.6	...c	3.0	3.1	3.2	3.5	3.3	3.2	3.0	2.6	2.0
4	1.7	2.5	...a	2.9	...a	...a	...a	3.3	3.3	3.1	2.9	2.5	2.1
5	1.6	2.1	2.5	2.9	3.0	3.3	3.4	3.3	3.3	3.2	2.9	2.6	3.0
6	1.5	1.9	2.5	2.8	2.8	2.9	3.4	p3.3	p3.3	3.2	3.0	2.6	2.0
7	1.3	2.1	2.7	...c	...c	...c	...c	...c	3.3	3.1	3.0	2.2	2.1
8	1.5	2.1	2.6	3.0	3.2	3.5	...a	3.5	3.4	3.3	3.0	2.6	...a
9	1.8	2.4	2.7	3.0	3.2	3.4	3.2	3.5	3.4	3.3	3.1	2.7	2.0
10	1.8	2.4	2.8	3.1	...a	2.8	...a	3.1	3.4	...a	...a	...a	2.3
11	1.9	2.3	...a	3.0	3.3	...a	3.5	3.4	3.3	3.3	3.0	2.4	2.0
12	1.7	2.3	2.8	3.1	3.3	3.4	3.4	3.1	3.5	3.2	3.0	2.8	2.1
13	1.7	2.4	2.7	3.0	3.3	3.5	...a	...a	3.1	2.8	...a	...a	2.0
14	...a	2.4	2.9	3.1	3.3	3.4	3.5	3.5	3.4	3.2	3.0	2.5	2.0
15	1.5	2.3	2.7	3.0	3.2	3.4	3.4	3.5	3.4	3.2	3.0	2.7	2.0
16	1.6	2.3	2.7	3.0	3.2	3.3	...a	...a	3.4	3.2	3.1	2.7	2.0
17	...a	2.4	2.7	3.1	3.3	3.3	3.5	...a	3.4	3.2	3.0	2.5	...a
18	1.5	2.0	2.8	2.9	3.1	...c	...a	3.1	...c	3.4	3.0	2.6	...
19	...a	2.3	...c	3.1	3.3	3.4	3.4	3.3	...c	3.4	...a	...a	...a
20	...a	2.2	2.7	2.7	2.9	...a	2.9	...a	3.2	3.2	3.1	2.5	...a
21	1.5	2.2	2.7	3.0	3.4	3.2	3.5	3.5	3.4	3.2	3.1	2.7	2.0
22	...a	2.0	2.9	3.0	3.4	3.5	3.5	3.5	3.4	3.1	2.9	...a	...a
23	1.7	2.3	2.8	...c	2.7	3.4	...a	3.4	...a	...a	...a	...a	...a
24	1.5	2.3	2.7	3.0	3.2	p3.1	3.5	...c	...a	2.9	...a	2.7	...a
25	1.6	2.3	2.7	3.4	3.3	3.4	...a	3.4	3.3	3.3	2.9	2.5	...a
26	...a	2.3	2.8	2.8	3.2	3.0	2.8	3.2	3.2	3.2	2.9	2.5	2.0
27	1.6	2.3	2.7	3.0	2.9	3.3	3.3	3.3	...a	3.3	3.0	2.5	...a
28	1.2	2.2	2.7	3.0	3.2	...a	...a	3.4	3.2	...b	3.0	2.6	2.0
29													
30													
31													
MEAN*	1.6	2.2	2.8	3.0	3.2	3.3	3.3	3.4	3.3	3.2	3.0	2.6	2.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 231

MARCH 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1943

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.9	2.7	2.8	2.4	2.3	2.4	3.6	5.4	5.8	6.5	7.0	6.3	6.8	7.7	7.6	7.5	7.5	7.4	7.4	7.0	5.5	4.2	3.6	3.7	5.2
2	3.8	3.6	3.6	3.5	3.4	2.5	3.6	4.7	5.0	5.9	6.3	7.1	7.0	7.5	7.4	7.0	6.9	7.2	8.1	7.7	7.2	7.0	5.5	4.3	5.7
3	4.0	4.1	4.0	3.3	2.8	2.4	p3.0	...c	5.6	...c	...c	7.1	7.9	8.2	7.2	7.4	7.4	7.4	7.5	7.0	6.5	4.7	4.3	4.3	...
4	4.4	4.0	3.9	3.0	2.7	2.8	3.7	5.2	6.1	5.5	6.6	7.1	8.3	9.1	7.9	7.5	7.4	7.2	7.4	6.6	6.5	5.3	4.4	4.5	5.7
5	4.0	3.8	3.8	3.0	2.9	2.8	2.8	3.7	4.1	4.4	5.0	p5.6	5.2	5.2	5.4	5.7	5.4	5.4	5.2	5.1	4.1	3.6	3.6	3.6	4.3
6	3.5	3.5	3.4	3.5	3.3	3.0	3.6	4.1	4.4	4.6	4.9	5.3	5.1	5.3	5.3	5.4	5.3	5.1	5.2	5.0	4.5	3.9	3.8	3.7	4.4
7	3.8	3.4	3.6	3.5	2.7	2.8	3.5	5.2	5.1	6.4	6.3	p6.4	6.4	6.7	7.1	6.8	6.4	6.1	5.8	6.0	5.2	4.3	4.0	3.9	5.1
8	3.6	3.4	3.4	3.3	3.0	3.2	4.2	5.1	5.4	5.4	5.4	6.5	7.0	7.5	7.9	7.5	6.5	6.2	6.4	6.6	5.9	4.5	3.7	3.6	5.2
9	3.5	3.7	3.8	4.1	2.9	2.8	3.9	4.9	p5.9c	p6.5c	6.7	6.6	p7.7	8.4	7.8	7.2	6.8	7.5	7.6	7.5	5.6	4.0	2.9	2.7	5.5
10	2.9	3.4	3.7	3.6	3.4	2.9	3.7	5.5	5.2	5.7	5.4	5.4	6.0	6.4	6.4	6.6	6.6	6.4	5.7	4.8	4.4	4.1	3.8	3.6	4.8
11	3.5	3.6	3.5	3.6	3.6	3.2	3.7	4.8	5.2	5.9	6.1	6.6	7.0	7.7	7.8	7.7	6.8	6.4	6.1	5.7	5.1	4.2	3.8	3.8	5.2
12	4.0	3.9	4.0	4.0	4.1	4.3	4.2	4.7	5.7	...c	...c	5.3	6.0	5.7	6.7	6.5	5.4	5.3	5.2	4.9	4.8	5.0	4.2	4.3	...
13	4.4	4.4	4.3	4.3	4.4	3.9	3.7	4.9	6.1	6.4	6.7	7.1	7.1	7.3	7.6	7.6	6.1	6.1	5.7	5.1	4.4	4.2	4.1	4.0	5.4
14	4.0	4.1	4.2	4.0	3.4	3.3	4.0	5.4	6.2	6.3	6.0	6.6	7.1	7.7	8.5	8.8	7.9	6.7	5.7	5.3	4.7	4.2	4.3	4.4	5.5
15	4.2	4.0	4.0	3.9	3.8	3.3	4.0	5.8	6.3	6.6	p6.3	6.4	6.8	7.3	...c	...c	...c	7.2	7.1	6.1	4.4	3.8	3.9	3.9	...
16	3.8	3.9	3.8	3.7	3.6	3.2	4.1	6.0	...c	6.1	6.0	6.6	7.5	8.2	8.3	8.9	8.4	7.9	7.5	7.9	5.6	4.3	4.4	3.8	...
17	3.9	3.9	3.7	3.9	3.3	2.9	3.5	5.1	5.4	6.0	5.5	p6.3	6.5	6.4	7.0	7.0	6.6	6.1	5.8	5.1	4.4	4.1	3.9	4.0	5.0
18	3.9	3.8	3.6	3.5	3.1	3.2	3.7	5.7	6.0	6.3	...c	...c	6.9	7.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
19	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.3	7.3	7.7	5.9	5.4	5.0	4.5	4.1	...
20	4.0	p3.9	4.0	p4.0	...c	...c	4.0	5.0	5.6	6.3	7.0	7.1	7.5	7.5	8.1	9.2	9.1	7.7	7.2	7.1	5.0	4.1	3.9	4.0	...
21	4.2	4.4	4.2	4.1	3.8	3.8	3.7	5.0	5.2	6.0	5.6	7.5	8.7	9.2	9.0	7.5	8.3	8.2	7.7	6.6	5.8	5.0	3.8	3.6	5.9
22	3.6	3.6	3.7	3.9	3.8	3.9	3.8	5.2	5.9	p6.1	6.0	7.0	8.2	8.8	...c	7.8	7.7	7.9	7.6	6.0	5.2	4.8	5.0	4.5	...
23	4.5	4.3	4.3	4.1	3.9	3.1	3.7	4.2	5.1	p5.4	p5.9	6.9	7.8	...c	...c	...c	7.1	7.4	7.4	6.7	5.6	4.5	3.6	3.9	...
24	4.2	4.2	4.3	4.1	3.7	3.5	3.6	5.7	7.0	7.5	8.2	9.0	10.0	9.8	...c	9.9	10.0	8.3	7.2	5.5	4.3	3.6	3.7	3.6	...
25	3.5	3.5	3.6	3.6	3.2	3.5	3.5	5.2	p6.3	8.7	...c	...c	...c	...c	...c	...c	9.0	9.0	7.8	5.5	4.5	3.9	3.2	3.0	...
26	2.9	3.0	3.2	3.3	2.8	2.6	3.5	5.2	6.0	p6.8	7.5	7.9	8.4	8.4	7.0	8.6	9.2	8.5	7.8	6.3	4.2	3.7	3.3	3.0	5.6
27	3.1	3.2	3.3	3.3	3.4	3.3	3.7	5.7	p6.5	7.1	6.4	6.8	7.8	7.5	7.0	7.5	8.0	7.6	7.5	6.0	3.5	2.9	3.0	3.1	5.3
28	3.2	3.2	3.3	3.5	3.4	3.0	3.5	5.5	6.3	6.7	p6.9	p6.9	8.1	8.1	7.7	7.8	8.2	8.2	7.4	4.7	3.8	3.1	3.1	3.2	5.4
29	3.3	3.5	3.4	3.6	3.5	2.9	3.2	5.3	6.5	6.6	6.7	7.0	p7.5	8.3	8.6	9.3	9.5	9.3	p7.4	5.6	3.7	3.4	3.4	3.5	5.6
30	3.6	3.9	3.8	3.3	2.8	3.0	3.1	3.8	...g	4.1	...g	...g	4.8	4.8	4.4	4.4	4.5	4.3	4.2	3.3	2.9	2.3	2.2	2.0	...
31	2.0	2.0	2.0	2.0	1.9	1.8	2.3	3.9	4.2	6.0	5.4	6.2	6.3	7.0	8.0	8.2	7.8	6.5	5.0	4.5	4.0	3.5	3.5	3.6	4.5
* MEAN	3.7	3.7	3.7	3.6	3.3	3.2	3.6	5.0	5.6	6.1	6.2	6.7	7.2	7.5	7.3	7.5	7.4	7.0	6.7	5.9	4.9	4.1	3.8	3.7	5.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 232

MARCH 1943 | MARCH 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	250	250	250	250	...a	...a	240	230	295	270	330	340	305	300	300	280	235	245	220	215	225	280	260	...
2	290	275	260	250	...a	260	250	235	210	325	320	310	320	320	305	300	300	300	260	225	235	235	220	235	...
3	280	260	225	240	240	200	p260	...c	230	...c	...c	295	295	295	295	300	280	275	245	235	235	230	285	260	...
4	240	245	225	230	260	260	240	235	250	230	320	330	320	300	310	300	305	250	255	240	235	215	260	250	263
5	260	250	260	270	300	285	280	240	...	...	445	p360	410	440	385	350	340	300	250	240	220	270	275	250	...
6	250	235	260	220	250	260	260	230	375	490	450	410	460	390	400	360	340	300	250	235	250	...a	260	285	...
7	265	260	280	220	250	270	275	245	300	300	285	p350	300	330	310	295	300	240	250	230	220	235	245	270	272
8	250	245	230	230	230	250	245	220	270	315	...a	335	320	330	300	295	285	260	...a	235	220	220	240	245	...
9	...a	...a	...a	...a	...a	230	230	220	235	p255	280	350	p330	300	295	290	300	240	250	240	230	210	230	270	...
10	...a	...a	260	240	210	...a	260	230	290	295	320	410	380	345	320	310	290	220	230	230	230	250	230	270	...
11	250	270	280	240	230	235	245	230	320	310	325	360	345	320	300	285	280	265	245	230	260	250	260	260	275
12	260	...a	250	...a	250	245	275	240	285	...c	...c	400	350	400	345	300	310	...a	250	260	260	250	240	250	...
13	250	250	250	240	230	230	265	225	280	300	300	310	330	320	300	300	290	...a	...a	220	240	260	270	260	...
14	265	250	235	225	215	240	250	240	265	260	320	325	320	325	290	290	270	250	240	205	230	260	275	250	262
15	250	240	270	250	220	245	260	240	230	250	p265	315	300	300	...c	...c	...c	230	...a	215	...a	250	265	240	...
16	250	250	240	235	220	265	255	230	230	280	280	325	310	310	295	290	225	230	240	230	180	270	240	270	252
17	280	260	270	230	210	...a	270	245	285	265	390	p340	330	360	300	280	275	...a	225	210	...a	240	265	250	...
18	240	240	235	235	230	220	240	240	220	260	...c	...c	...d	...d	...c	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...c	265	265	220	...a	235	235	230	240	...
20	255	p265	255	p250	240	250	260	240	230	280	290	245	290	300	310	295	255	230	235	210	215	245	260	270	257
21	275	250	255	250	250	240	250	225	240	270	280	330	300	280	270	280	275	230	230	215	210	225	240	260	255
22	270	245	270	235	245	230	225	230	230	p270	315	370	305	310	...c	...c	280	250	230	220	...a	260	245	260	...
23	240	...a	...a	260	220	225	250	230	235	p345	p330	350	305	...c	...c	...c	300	250	245	215	200	220	...a	310	...
24	280	275	260	265	235	230	265	240	225	270	260	270	270	275	...c	280	240	235	220	210	215	245	270	270	...
25	280	...a	260	230	235	200	200	230	p240	250	...c	...c	...c	...c	...c	...c	250	250	225	200	230	240	250	280	...
26	280	290	285	240	...a	...a	240	230	230	p270	295	290	300	290	300	310	255	250	235	220	215	260	230	270	...
27	280	280	280	270	260	230	230	240	p240	270	260	325	290	290	325	310	280	250	235	210	195	270	285	270	266
28	270	270	260	250	240	250	250	230	250	270	p290	p280	300	300	295	285	240	260	225	200	225	280	280	270	261
29	270	260	250	240	220	220	270	250	240	270	300	310	p300	300	300	290	285	250	p215	210	230	300	280	...a	...
30	300	250	230	240	280	310	330	280		...			...	480	...	510	430	250	265	...a	290	240	320	320	...
31	325	290	305	285	300	300	300	250	270	280	300	340	360	340	310	285	250	245	240	230	270	275	280	280	288
MEAN*	267	258	257	244	242	245	256	237	255	283	312	332	325	328	311	308	285	252	239	223	229	247	259	265	269

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 233

MARCH 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.4	4.4	4.6	4.7	4.6	4.5	4.4	4.2	...	...
2	...	...	...	4.3	4.5	4.5	4.6	4.6	4.5	4.4	4.2	3.8	...
3	...	...	...	...c	...c	4.6	...a	4.7	...a	...a	4.2	3.8	...
4	...	...	3.9	...	4.4	4.6	4.5	4.5	4.5	4.4	4.2	...	...
5	...	...	3.6	4.0	4.2	4.3	4.3	4.3	4.3	4.3	4.1	3.8	...
6	...	...	3.8	4.1	4.2	4.3	4.4	4.3	4.3	4.3	4.0	3.8	...
7	...	...	4.0	4.1	4.4	...a	4.5	4.5	4.4	4.4	4.1	...	...
8	...	...	3.8	4.3	...a	4.5	4.5	4.6	4.5	4.3	4.3	...	...
9	...	...	...	4.2	4.3	5.0	p4.8	4.6	4.6	4.3	4.2	...	...
10	...	...	4.0	4.2	4.3	4.5	...a	4.4	4.4	4.2	4.1	...	...
11	...	...	4.2	4.3	4.5	4.5	4.5	4.5	4.4	4.3	4.0	...	...
12	...	...	4.0	...c	...c	4.4	4.4	4.4	4.3	4.3	4.1	...	...
13	...	...	4.0	4.3	4.6	4.5	4.7	4.6	...a	4.4	...a	...	...
14	...	...	4.0	4.2	4.5	4.5	4.7	4.6	4.5	4.4	4.1	...	...
15	...	...	4.0	4.3	4.5	4.6	4.5	4.5	...	...	...	...	...
16	...	...	...	4.5	4.5	4.6	4.8	4.6	4.5	4.3	...	...	...
17	...	...	3.8	4.1	4.5	4.5	4.5	...a	...a	...a	...a	...	...
18	...	...	...	4.2	...c	...c	4.6	4.4	...c	...c	...c	...	...
19	...	...	...	...c	...	...	...	...	...	...	...c	...	...
20	...	...	...	4.5	4.5	4.6	4.6	4.6	4.5	4.5	4.0	...	...
21	...	...	...	4.2	4.3	4.8	4.7	4.6	4.4	4.3	4.1	...	...
22	...	...	...	p4.1	4.4	4.8	4.7	4.6	...c	4.6	...	...	...
23	...	...	...	p4.2	4.7	4.6	4.5	...c	...c	...c	4.0	...	...
24	...	...	...	4.3	...h	4.5	4.5	4.6	...c	4.4	...	...	...
25	...	...	...	...c	...	...	...	...	...	...	...c	...	...
26	...	...	...	4.2	4.4	4.2	4.6	4.5	4.7	4.2	...	...	...
27	...	...	...	4.2	4.3	4.8	4.4	4.5	4.6	4.3	...	...	...
28	...	...	...	4.0	4.5	4.5	4.5	4.6	4.2	4.2	...	...	...
29	...	...	...	4.1	4.5	4.6	4.5	4.4	4.5	4.2	4.0	...	...
30	...	...	3.5	3.8	3.8	3.9	4.0	4.0	4.0	4.0	3.7	...	...
31	...	...	...	4.0	...a	...a	4.5	4.5	4.3	4.2	...	...	...
* MEAN	...	...	4.2	4.2	4.4	4.5	4.4	4.5	4.4	4.3	4.1	3.8	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	230	210	220	190	185	...a	240	235	...	...
2	...	...	...	240	...a	...a	...a	205	220	230	240	240	...
3	...	...	...	...c	...c	...a	...a	...a	...a	...a	...a	235	...
4	...	...	235	...	200	210	225	220	...c	220	235	...	...
5	...	...	235	...a	...a	...a	...a	250	...a	240	240	235	...
6	...	...	235	210	200	...h	230	220	...a	...a	220	230	...
7	...	...	230	...a	...a	...a	...a	...a	...a	...a	225	...	...
8	...	...	250	235	...a	200	200	190	...h	...h	...c	...	...
9	...	...	...	230	200	205	p200	185	...a	...a	...a	...	...
10	...	...	220	230	225	...a	...a	200	220	220	235	...	...
11	...	...	235	220	230	210	220	210	230	230	...a	...	...
12	...	...	245	...c	...c	190	200	...a	250	240	220	...	...
13	...	...	200	235	...a	...a	200	...a	...a	...a	...a	...	...
14	...	...	225	220	215	230	215	200	210	235	225	...	...
15	...	...	235	230	220	195	200	...a	...c	...c	...c	...	...
16	...	...	...	215	200	190	200	210	210	205	...	...	...
17	...	...	210	220	225	220	...a	...a	...a	...a	...a	...	...
18	...	...	...	200	...c	...c	...d	...d	...c	...	...	...	...
19	...	...	...	...c	...	...	...	...	...	...	...c	...	...
20	...	...	...	220	195	200	220	235	240	...c	230	...	...
21	...	...	...	225	220	220	200	220	200	230	...c	...	...
22	...	...	...	p225	...a	210	...a	215	...c	210	...	...	...
23	...	...	...	p215	...a	...a	220	...c	...c	...c	225	...	...
24	...	...	...	...a	...h	210	200	190	...c	230	...	...	...
25	...	...	...	...c	...	...	...	...	...	...c	...	...	...
26	...	...	...	230	220	210	220	230	220	215	...	...	...
27	...	...	...	230	230	200	200	250	215	260	...	...	...
28	...	...	...	230	220	230	215	240	220	230	...	...	...
29	...	...	...	230	225	210	225	240	250	240	240	...	...
30	...	...	270	230	...a	240	220	235	240	235	...	...	...
31	...	...	...	...a	...a	...a	...a	235	235	245	...	...	...
* MEAN	...	...	233	225	215	211	210	217	226	231	231	235	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f°F2 EQUAL TO OR LESS THAN f°F1   h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 234

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1943 | MARCH 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.8	0.8	0.9	1.0	0.9	0.9	1.0	1.0	0.9	0.6	0.6	...	2.3	2.7	3.2	3.2	3.3	3.3	3.3	3.2	3.1	3.1	2.6	1.9
2	...	0.6	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6	0.6	1.3	2.3	2.7	3.0	3.3	...a	3.2	3.0	3.2	3.0	3.0	2.6	2.0
3	...	...c	0.7	...c	...c	0.9	1.0	1.0	1.0	0.9	0.7	0.7	...e	1.2	...c	2.8	...c	...c	3.3	3.2	3.0	3.0	2.9	3.0	2.7	...a
4	...	...e	0.6	0.6	0.8	0.8	0.9	0.7	0.9	0.8	0.6	0.6	...e	1.3	2.2	2.7	3.0	3.2	3.5	...c	3.4	...c	3.2	3.0	2.5	1.9
5	...	0.6	0.8	1.0	1.1	1.0	1.0	1.0	1.0	0.8	0.7	0.7	...e	1.5	2.0	2.5	2.8	3.1	3.3	3.3	3.3	3.3	3.1	2.8	2.4	1.8
6	...	0.6	0.6	0.6	0.8	0.8	1.0	1.0	0.9	0.8	0.6	0.6	...e	1.5	2.1	2.6	3.0	3.1	3.3	3.3	3.3	3.3	3.1	2.9	2.3	1.9
7	...	0.6	0.8	1.0	1.0	1.1	1.0	1.1	1.0	1.0	1.0	0.7	0.6	1.4	2.2	2.6	3.0	3.2	3.0	3.3	...c	3.2	3.0	3.0	2.6	1.8
8	...	0.6	0.6	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.5	...e	1.2	2.1	2.6	2.9	3.2	3.2	3.4	3.3	3.3	3.3	3.0	2.5	...a
9	...	0.6	0.8	0.8	0.9	0.8	1.0	1.0	1.0	0.8	0.6	0.6	...e	1.5	2.2	2.7	3.0	3.0	3.2	3.3	3.4	3.5	3.2	2.6	2.4	1.6
10	...	0.6	0.6	0.8	0.7	0.8	1.0	1.0	0.8	0.8	0.6	0.6	...e	1.4	...a	2.5	2.8	3.1	3.2	3.3	3.0	3.0	2.9	2.8	...a	...a
11	...	0.6	0.6	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	...e	1.3	2.2	2.6	3.0	3.1	3.2	3.0	3.1	3.0	...a	2.5	1.8	...a
12	...	p0.8	0.6	...c	...c	0.9	1.0	0.7	1.0	1.0	1.0	0.7	...c	1.1	2.1	2.6	...c	...c	3.3	3.3	3.1	3.3	3.1	2.9	2.6	1.7
13	...	0.6	0.7	0.8	0.9	1.0	0.9	1.0	1.0	1.0	0.7	0.8	0.7	1.3	2.2	2.8	3.0	3.0	3.1	...a	3.0	...a	...a	...a	...a	...a
14	...	...e	0.6	0.7	0.6	0.8	0.6	0.9	...c	...c	...c	0.6	...e	1.2	2.3	2.8	3.0	3.2	3.4	3.5	3.6	3.1	3.3	3.0	2.4	1.6
15	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	0.6	...e	1.3	2.2	2.7	3.0	3.1	...c	3.3	3.3	...c	...c	...c	2.5	...a
16	...	...e	0.5	0.8	0.8	0.9	1.0	1.0	0.9	0.8	0.8	0.6	...e	1.2	2.3	2.9	3.0	3.2	3.1	3.5	3.5	3.2	3.1	2.8	2.4	1.7
17	...	0.6	0.6	0.6	0.6	1.0	0.9	0.9	1.0	0.7	0.7	0.6	...	1.4	2.1	2.6	3.0	3.3	3.4	3.5	3.4	3.4	3.1	2.7	2.2	...
18	...	0.6	0.7	0.8	...c	...c	1.0	1.0	...c	...c	...c	...c	...	1.2	2.2	2.6	2.9	...c	...c	3.3	3.4	...c	...	...	...	...c
19	...	...	...	...	...	...	...	...	...	...c	0.7	0.6	0.5	...c	...	...	...	...	...	...	...	...	...c	2.9	2.4	...a
20	...	0.7	*0.6	0.6	0.9	1.0	1.0	1.0	1.0	1.0	0.8	0.6	...	1.1	2.2	2.7	3.0	2.8	...c	3.5	...c	...c	3.1	2.8	2.3	...c
21	...	0.5	0.6	0.6	0.8	0.8	0.8	0.6	0.8	0.6	0.7	...e	...	1.0	2.1	2.7	2.9	2.8	3.1	3.0	3.0	...a	...c	2.7	2.3	1.4
22	...	0.6	0.6	0.6	0.8	1.0	0.8	0.8	...c	0.8	0.7	0.6	...	...	2.0	2.5	2.8	2.9	3.0	...a	...c	...c	3.0	2.7	2.2	...a
23	...	0.5	0.6	p0.6	0.8	0.8	0.8	...c	...c	...c	0.6	0.6	...	1.2	2.0	2.6	p2.8	3.1	2.8	2.8	...c	...c	...c	2.7	...a	1.6
24	...	0.6	0.6	0.8	1.0	0.9	1.0	0.9	...c	0.7	0.7	0.6	...	1.3	2.0	2.5	2.9	3.1	...c	...c	...c	...c	3.0	2.6	2.3	1.6
25	...	...e	0.6	...c	...	...	...	...	...	...c	0.7	0.5	...	...a	2.1	2.6	2.9	...c	...c	...c	...c	...c	...c	2.8	2.3	1.4
26	...	0.7	0.7	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.7	0.6	0.5	...	2.2	2.7	3.0	3.0	3.3	...a	...a	...a	...a	3.0	2.5	...a
27	...	0.6	0.6	0.8	0.7	0.8	0.7	0.8	1.0	0.7	0.6	0.5	...	1.1	2.1	2.5	2.8	3.2	3.4	3.3	3.3	3.2	3.1	2.7	2.3	...a
28	...	0.6	0.7	0.8	0.8	0.7	0.8	0.9	0.8	0.6	0.7	0.5	...	1.0	2.2	2.6	2.9	...c	3.3	...a	3.3	3.2	3.0	2.7	...a	...a
29	...	0.6	0.7	0.6	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.6	...	1.2	2.0	2.8	2.9	3.3	3.4	3.3	3.3	3.2	2.9	2.6	2.3	...a
30	...	0.7	0.7	0.8	0.8	1.1	1.0	1.0	0.7	0.7	0.7	0.7	...	1.2	2.1	2.4	2.7	2.8	2.8	2.5	2.8	...a	2.8	2.4	1.8	...a
31	...	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.5	...	1.1	1.9	2.4	2.8	3.0	3.1	3.2	3.1	2.9	2.9	2.7	...a	...a
MEAN*	...	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.5	1.2	2.1	2.6	2.9	3.1	3.2	3.2	3.2	3.2	3.0	2.8	2.4	1.7

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 235

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1943 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — APRIL 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.8	3.5	3.9	4.7	3.3	3.3	3.6	5.4	6.8	p7.6c	8.4	8.4	8.5	8.4	8.9	9.1	8.8	8.0	5.3	4.2	3.5	3.2	3.0	3.0	5.6
2	3.1	3.3	3.6	4.2	3.4	3.3	3.7	5.7	...c	p6.7	6.5	7.2	9.4	9.8	9.6	9.6	8.1	6.8	5.5	4.1	3.3	3.2	3.2	3.4	...
3	3.5	3.5	3.6	3.5	3.2	2.9	3.2	5.2	7.1	7.0	7.5	7.9	9.8	11.0	11.0	10.0	8.9	7.8	6.3	5.5	5.2	4.6	3.6	3.7	5.1
4	p3.5a	3.4	3.8	3.7	3.9	3.9	3.7	5.0	5.3	5.8	6.6	p7.3c	8.0	8.0	7.8	7.8	7.4	7.0	6.1	4.7	4.1	p3.6	3.5	3.4	5.3
5	3.8	3.6	3.6	3.5	3.3	2.7	3.0	4.6	5.1	5.8	5.8	7.0	7.8	8.0	7.0	6.8	6.3	6.2	6.5	5.5	4.5	4.5	3.5	3.3	5.1
6	3.3	3.1	3.4	3.7	3.8	3.5	2.9	4.6	5.7	6.0	...c	...c	...c	...c	...c	6.3	...c	6.9	5.9	5.0	4.6	4.3	4.2	3.4	...
7	3.5	3.7	3.7	3.4	3.5	3.3	3.4	5.0	5.6	...c	p6.5	6.9	p7.8	...c	p7.7	p7.6	...c	...c	6.0	4.7	3.6	3.7	3.6	3.6	...
8	3.4	3.3	3.5	3.7	3.4	3.2	3.3	5.6	...c	...c	p6.6	...c	7.8	8.2	8.0	...c	8.0	7.5	6.5	4.3	3.3	3.6	3.4	3.2	...
9	3.4	3.3	3.4	3.4	3.4	3.0	3.2	5.5	...c	...c	...c	...c	p8.2	8.2	p8.5	...c	...c	6.8	5.6	4.3	3.4	3.7	3.7	3.5	...
10	3.3	3.3	3.4	3.5	3.3	3.1	3.2	5.4	6.4	7.7	8.4	...c	7.8	8.3	8.8	9.2	8.9	8.5	6.3	6.3	5.4	3.8	4.0	3.7	...
11	4.3	4.0	3.8	3.3	3.3	3.6	3.5	5.1	7.0	8.4	7.5	7.6	8.2	p8.8	8.8	6.6	6.0	5.2	4.8	3.6	3.2	3.7	3.5	3.6	5.3
12	3.7	3.6	3.0	4.0	3.5	2.8	3.0	4.6	6.0	6.4	7.2	...c	...c	6.3	6.8	6.6	5.9	5.3	4.8	3.9	3.6	3.2	3.1	3.1	...
13	3.2	3.0	...a	3.2	2.9	2.9	3.0	5.0	6.2	6.7	7.0	7.1	7.5	7.7	p8.0	7.5	7.0	...c	5.6	4.2	3.6	3.7	3.6	3.6	...
14	3.2	3.2	3.3	3.5	3.4	3.1	2.9	5.2	5.8	6.7	7.8	7.5	7.7	8.0	7.6	7.5	7.7	7.1	6.0	4.7	3.9	3.7	3.2	3.4	5.2
15	3.5	3.5	3.5	3.2	3.0	3.0	3.3	5.4	6.9	7.1	8.4	8.0	7.1	7.8	7.8	8.0	8.1	7.7	5.9	4.6	3.6	3.6	3.3	3.5	5.4
16	3.6	4.0	3.7	3.6	3.6	3.4	3.4	5.7	5.9	p7.0	p7.5	8.8	8.6	10.2	8.8	9.3	9.3	8.8	6.1	4.5	3.8	3.0	3.4	3.5	5.8
17	3.7	3.9	4.0	4.3	3.6	3.3	3.4	5.1	6.6	7.8	7.5	...c	p8.4	9.3	8.3	8.4	8.0	7.4	p6.5	4.1	3.8	3.5	3.7	3.8	...
18	3.8	3.9	4.3	4.4	4.5	3.7	3.2	4.9	5.9	8.1	7.8	7.9	7.7	7.9	8.3	8.9	8.0	7.6	5.4	3.3	3.0	3.1	3.9	3.2	5.5
19	3.3	3.3	3.3	3.6	3.3	3.0	2.9	5.3	p6.2	7.2	...c	...c	p8.0	8.5	8.9	9.1	p8.2	7.3	5.6	3.8	...a	3.1	...a	...a	...
20	3.6	3.4	3.6	4.0	4.3	3.4	3.3	5.1	6.2	...c	...c	...c	...c	...c	...c	...c	7.5	7.0	6.4	4.1	3.6	3.3	3.3	3.0	...
21	3.2	3.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	10.5	9.9	...c	...c	...c	...c	...c	...c	...c	...
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.9	7.4	8.8	8.0	8.0	9.4	8.8	7.7	6.3	4.7	4.0	4.5	4.1	4.1	...
23	3.8	3.9	3.6	3.7	4.1	4.0	4.0	5.8	7.2	6.7	7.3	8.4	8.0	8.1	8.1	8.5	8.5	7.3	5.2	3.3	2.9	3.3	3.2	3.1	5.5
24	3.3	3.2	3.1	3.3	3.4	3.0	2.8	5.0	6.3	6.5	7.4	8.1	8.2	6.0	7.3	8.1	7.9	6.5	6.1	4.3	3.1	3.3	3.1	2.8	5.1
25	3.0	3.0	3.3	...c	3.6	3.3	3.3	5.1	...c	...c	...c	...c	...c	6.5	7.8	9.0	8.5	7.9	6.0	4.2	2.7	2.9	3.1	3.1	...
26	3.3	3.3	3.6	3.6	3.7	3.6	3.1	4.9	5.7	7.8	7.3	9.5	10.1	10.2	9.7	9.8	9.2	6.3	6.5	4.6	3.9	4.3	4.8	4.6	6.0
27	3.8	4.0	4.1	4.1	4.1	3.9	3.6	4.7	6.2	...c	7.0	9.0	9.4	9.3	9.3	9.0	8.9	6.3	4.9	3.2	...a	3.2	3.4	3.0	...
28	3.4	3.3	3.4	3.6	3.4	3.0	2.9	5.2	6.1	6.1	7.2	7.9	8.1	7.4	7.2	7.5	7.2	6.1	4.6	3.2	2.9	3.5	3.6	3.6	5.0
29	3.9	4.2	4.3	4.4	4.1	3.2	3.3	4.8	5.9	7.3	8.1	8.2	8.1	8.5	8.9	8.5	8.2	7.3	6.9	5.3	4.2	3.9	4.2	3.1	5.8
30	3.7	4.2	4.0	4.1	4.1	4.3	4.1	5.4	6.4	7.4	7.6	8.5	8.6	7.3	8.2	7.9	7.3	6.2	4.6	4.2	3.2	3.0	3.5	3.6	5.5
31																									
MEAN*	3.5	3.5	3.6	3.8	3.6	3.3	3.3	5.2	6.2	7.0	7.4	7.9	8.3	8.3	8.3	8.4	8.0	7.1	5.8	4.4	3.7	3.6	3.6	3.4	5.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F_2 EQUAL TO OR LESS THAN f^0F_1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 236

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1943 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	300	285	...a	...a	215	...a	210	250	250	...c	285	290	300	300	305	290	235	230	210	...a	220	275	...a	290	...
2	300	290	...a	...a	...a	250	250	240	...c	p235	300	320	310	290	310	230	...a	...a	235	...a	...a	300	295	300	...
3	290	250	270	230	230	230	240	240	240	270	300	315	350	300	280	280	240	240	220	...a	240	225	220	240	...
4	...a	280	300	...a	265	250	240	235	235	280	300	...c	270	300	280	280	265	...a	215	...a	...a	...a	...a	...a	...
5	...a	...a	280	...a	235	270	260	230	250	300	320	325	315	275	300	290	270	270	245	240	240	235	...a	250	...
6	270	290	...a	255	250	220	240	240	250	310	...c	...c	...c	...c	...c	240	...c	240	250	240	235	255	250	260	...
7	...a	...a	...a	260	...a	260	250	240	270	280	p300	280	p300	...c	p290	p280	...c	250	235	230	280	260	260	250	...
8	250	260	260	250	215	250	250	240	...c	...c	p270	...c	...c	275	280	...c	250	250	220	205	260	260	235	...a	...
9	270	275	...a	275	240	250	235	230	240	...c	...c	...c	p290	275	p270	...c	...c	240	220	220	...a	280	250	235	...
10	250	260	250	240	230	225	240	230	240	265	245	...c	...c	285	300	...c	...c	225	220	225	220	240	275	...a	...
11	250	220	240	235	250	250	285	235	240	255	250	280	315	p320	290	300	290	250	230	245	...a	...a	...a	...a	...
12	230	...a	250	250	220	...a	255	250	280	330	300	...c	...c	p330	300	280	240	230	225	230	240	245	...a	...a	...
13	...a	...a	...a	220	...a	...a	230	230	250	255	290	275	285	290	p285	270	220	...	220	220	...a	...a	...a	...a	...
14	...a	270	280	265	...a	230	230	230	230	235	270	250	255	290	270	250	240	240	220	220	225	240	230	240	...
15	...a	...a	230	240	225	260	230	230	240	270	280	260	285	290	290	270	240	240	215	225	230	240	250	...a	...
16	270	225	220	220	235	250	240	230	230	p240	p250	290	310	270	290	290	220	220	230	210	210	230	260	250	245
17	260	240	230	...a	200	240	230	240	240	250	290	...c	p280	275	275	265	235	235	p215	220	...a	235	...a	...a	...
18	...a	250	...a	250	220	210	260	240	240	270	240	250	270	230	280	250	240	230	190	190	250	240	200	...a	...
19	...a	...a	...a	...a	210	...a	220	220	p230	255	...c	...c	p280	255	280	250	p225	220	210	...a	...a	...a	...a	...a	...
20	240	250	...a	250	210	220	210	220	220	...c	...c	...c	...c	...c	...c	...c	230	230	200	210	245	230	220	260	...
21	...a	245	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	260	240	...c	...c	...c	...c	...c	...c	...c	...
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	250	255	275	300	270	255	235	215	210	230	...a	220	230	220	...
23	215	235	235	260	230	235	...a	235	230	255	280	260	270	290	270	265	250	225	205	200	260	250	240	250	...
24	250	240	265	250	220	220	230	225	215	245	270	260	260	240	290	270	240	220	200	220	230	240	225	...a	...
25	240	250	270	...c	230	245	230	220	225	...c	...c	...c	...c	310	290	260	250	235	200	220	240	250	250	...c	...
26	...c	...c	...a	280	...a	...c	...c	240	230	255	290	275	270	280	270	270	240	230	230	210	260	285	240	230	...
27	...a	280	260	280	...a	230	220	230	240	...c	...a	270	260	285	...a	250	230	210	210	200	...a	...a	...a	...a	...
28	265	260	260	240	210	215	...a	220	225	250	255	240	240	260	260	235	230	200	210	215	230	235	220	255	...
29	250	250	230	225	200	195	230	220	230	255	260	260	250	285	255	265	245	220	215	210	210	195	220	215	233
30	260	260	250	250	225	220	225	230	245	260	260	280	250	300	260	255	230	210	230	215	210	250	225	230	243
31																									
MEAN*	259	257	254	249	226	236	238	233	239	265	276	276	282	284	282	265	241	231	218	219	237	246	240	248	250

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 237

APRIL 1943 | IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY | APRIL 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.5	4.5	4.7	4.3	4.4	4.2	...	...	...
2	...	...	...	4.0	4.2	4.4	4.6	...a	4.6	...	...	...	...
3	...	...	...	4.2	4.1	4.5	4.5	...a	4.5	4.0	...	...	...
4	...	...	...	4.1	4.3	...a	4.4	4.6	4.4	4.2	...	...	...
5	...	...	...	4.1	4.2	4.3	4.3	4.4	4.3	4.2	3.8	...	...
6	...	...	...	4.2	4.2	...c	...c	...c	...c	...	...	...	...
7	...	...	3.6	4.2	4.4	4.1	4.5	4.4	4.2	...a	...	...	...
8	...	...	...	4.0	4.3	4.3	4.2	4.4	4.3	...c	...	...	...
9	...	...	...	4.0	...c	...c	4.5	4.4	4.3	...	...	...	...
10	...	...	...	4.2	4.5	4.5	4.4	4.5	4.6	...	...	...	...
11	...	...	...	3.9	3.9	4.2	4.5	4.3	4.1	4.0	3.6	...	...
12	...	...	3.6	4.3	...a	4.3	4.4	4.3	4.2	4.1	...	...	...
13	...	...	...	4.2	4.4	4.2	4.5	4.3	4.4	4.1	...	...	...
14	...	...	...	...	4.3	4.4	4.6	4.6	p4.4	...	...	...	...
15	...	...	...	3.8	4.4	4.5	4.5	4.4	4.4	4.0	...	...	...
16	...	...	...	...	...	4.5	4.4	4.4	4.5	4.0	...	...	...
17	...	...	...	3.6	4.6	...c	4.4	4.5	4.3	...	...	...	...
18	...	...	...	3.9	4.4	4.5	4.6	4.2	4.4	...	...	...	...
19	...	...	...	...c	...c	...c	p4.4	...c	4.5	...	...	...	...
20	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
21	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...	...
22	...	...	...	...c	4.4	4.4	4.0	4.8	4.2	...	...	...	...
23	...	...	...	4.0	4.4	4.4	4.4	4.6	4.3	...	...	...	...
24	...	...	...	4.0	4.3	4.4	4.2	4.3	4.3	4.1	...	...	...
25	...	...	...	...c	...c	...c	...c	4.7	4.3	...	...	...	...
26	...	...	...	4.1	4.2	4.5	4.3	4.6	4.3	3.8	...	...	...
27	...	...	...	...	...	4.5	4.5	4.5	...a	4.1	...	...	...
28	...	...	...	4.0	4.1	4.3	4.1	4.5	4.3	4.0	...	...	...
29	...	...	...	...	4.2	4.2	4.3	4.5	3.7	4.1	...	...	...
30	...	...	...	4.0	4.1	4.0	4.2	4.5	4.1	4.0	...	...	...
31													
* MEAN	...	...	3.6	4.0	4.3	4.4	4.4	4.5	4.3	4.1	3.7	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...c	...a	...a	220	...c	225	240	...	...	...
2	...	...	...	...a	...a	210	...a	...a	240	...	...	...	...
3	...	...	...	230	240	230	210	...a	250	...a	...	...	...
4	...	...	...	240	230	...a	210	215	220	...a	...	...	...
5	...	...	...	230	215	210	220	...a	230	230	230	...	...
6	...	...	...	240	230	...c	...c	...c	...c	...	...	...	...
7	...	...	235	240	...h	190	220	...c	240	...a	...	...	...
8	...	...	...	230	235	200	...h	250	...a	...	...	...	...
9	...	...	...	230	...c	...c	210	210	220	...c	...	...	...
10	...	...	...	225	215	200	...h	240	235	...	...	...	...
11	...	...	...	220	220	220	230	225	225	245	245	...	...
12	...	...	250	260	...a	...a	...a	...a	...a	230	...	...	...
13	...	...	...	210	...a	200	200	200	230	240	...	...	...
14	...	...	...	...	215	220	...h	...h	p240c	...	...	...	...
15	...	...	...	210	230	235	220	210	240	...a	...	...	...
16	...	...	...	...	...	230	210	240	250	...a	...	...	...
17	...	...	...	220	210	...c	225	230	225	...	...	...	...
18	...	...	...	230	230	200	200	200	230	...	...	...	...
19	...	...	...	...c	...c	...c	p210c	...c	225	...	...	...	...
20	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...	...
21	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...	...
22	...	...	...	...c	200	200	200	205	240	...	...	...	...
23	...	...	...	230	230	225	220	210	...a	...	...	...	...
24	...	...	...	215	230	240	210	220	220	250	...	...	...
25	...	...	...	...c	...c	...c	...c	215	230	...	...	...	...
26	...	...	...	225	215	240	240	230	230	225	...	...	...
27	...	...	...	...	...	225	...a	...a	...a	...c	...	...	...
28	...	...	...	200	195	230	200	200	...h	230	...	...	...
29	...	...	...	...	235	225	220	200	230	210	...	...	...
30	...	...	...	230	230	215	...a	240	225	215	...	...	...
31													
* MEAN	...	...	242	227	222	217	214	219	232	232	238	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 238

APRIL 1943 | | APRIL 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.7	...c	1.0	1.1	1.0	1.0	1.0	1.0	0.9	0.7	...
2	...	0.6	1.1	0.8	0.8	1.0	0.6	0.7	0.9	0.8	0.7	0.6	...
3	...	0.8	0.8	0.9	0.8	1.0	1.0	1.0	1.0	0.7	0.7	0.7	...
4	...	0.6	0.8	1.0	0.9	1.0	1.0	1.1	1.2	1.0	1.0	0.8	...
5	...	0.6	0.8	0.8	0.8	1.0	1.0	0.9	0.9	0.8	0.9	0.7	...
6	...	0.7	0.7	0.9	1.0	...c	...c	...c	...c	1.0	0.8	0.7	...
7	...	0.7	0.7	0.7	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	...
8	...	0.8	0.7	0.7	0.7	0.9	1.0	1.0	1.0	...c	0.7	0.8	...
9	...	...e	0.7	0.7	...c	...c	1.0	0.9	0.8	...c	...c	...e	...
10	...	0.6	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.6	0.6	...
11	...	...e	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.6	0.6	...e	...
12	...	0.6	0.7	0.7	1.0	0.9	0.8	0.8	0.8	0.7	0.6	0.7	...
13	...	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	...	...
14	...	...e	0.6	0.6	0.8	0.9	0.7	0.9	0.9	0.8	0.8	0.7	...
15	...	0.7	0.7	0.6	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	...
16	...	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.7	0.7	0.6	...
17	...	...e	...e	0.7	0.6	...c	0.7	1.0	0.8	0.9	0.7	0.6	...
18	...	...e	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.9	0.6	0.6	...
19	...	...e	0.7	0.7	...c	...c	0.8	0.8	0.8	0.8	0.7	...e	...
20	...	0.7	0.6	...c	...c	...c	...c	...c	...c	0.8	0.7	0.7	...
21	...	...c	...c	...c	...c	...c	...c	...c	...c	0.8	0.7	...c	...
22	...	...c	...c	...c	1.1	0.9	1.0	1.0	0.9	0.7	0.8	...e	...
23	...	0.7	0.8	0.7	0.9	0.9	1.0	0.7	0.7	0.7	0.7	...e	...
24	...	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	...e	...
25	...	0.7	0.7	...c	...c	...c	...c	0.9	0.7	0.8	0.7	0.6	...
26	...	...e	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	...
27	...	...e	0.8	...c	...c	0.8	0.8	0.7	...c	...c	...c	0.7	...
28	...	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6	...e	...
29	...	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.6	...
30	...	0.6	0.7	0.6	0.7	1.0	0.8	0.7	0.8	0.7	0.6	0.7	...
31													
MEAN*	...	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.0	2.6	...c	3.0	3.2	3.3	3.2	3.3	3.0	2.6	2.3	...
2	...	2.0	2.5	2.9	3.1	3.0	3.2	3.1	3.3	2.9	2.8	2.7	...
3	...	2.1	2.6	3.0	3.1	3.0	3.3	3.1	3.1	2.9	...a	2.2	...
4	...	2.0	2.6	2.9	2.9	3.1	2.8	2.8	2.8	2.8	...a	...a	...
5	...	2.0	2.5	2.8	3.0	3.2	3.2	3.2	3.1	2.9	2.7	2.1	...
6	...	1.9	2.5	2.8	3.0	...c	...c	...c	...c	3.0	2.6	2.0	...
7	...	2.0	2.4	2.7	2.9	3.0	2.9	3.0	2.8	...a	2.8	2.8	...
8	...	2.0	2.5	2.9	3.3	3.2	3.2	3.3	3.1	...c	2.7	2.3	...
9	...	2.0	2.5	2.7	...c	...c	3.2	3.1	3.2	...c	...c	2.3	...
10	...	2.0	2.5	2.9	3.2	3.1	3.2	3.3	3.1	3.0	2.6	2.0	...
11	...	2.0	2.4	2.7	2.8	2.9	3.2	3.2	3.0	2.8	2.5	...a	...
12	...	2.0	2.4	2.8	3.0	3.1	3.1	3.2	3.0	2.8	2.5	...a	...
13	...	1.8	2.5	2.7	2.7	...a	3.0	3.2	3.0	2.9	2.5	...	...
14	...	2.2	2.5	3.0	3.2	3.3	3.2	3.2	3.1	2.9	2.5	2.0	...
15	...	2.0	2.5	2.9	3.1	2.8	3.4	3.2	3.2	2.5	2.8	2.0	...
16	...	2.0	2.6	2.8	3.0	3.4	3.2	3.1	3.0	2.9	...a	...a	...
17	...	1.8	2.5	2.8	3.2	...c	3.0	3.0	3.0	2.9	...a	2.4	...
18	...	2.0	2.5	2.9	2.9	3.2	3.1	3.0	3.2	2.8	2.6	1.9	...
19	...	2.0	2.6	2.8	...c	...c	3.2	3.4	3.0	2.7	2.7	...a	...
20	...	2.0	2.6	...c	...c	...c	...c	...c	...c	2.9	2.4	2.0	...
21	...	...c	...c	...c	...c	...c	...c	...c	...c	3.1	2.6	...c	...
22	...	...c	...c	...c	3.0	3.3	3.3	3.3	3.2	2.7	2.3	2.0	...
23	...	2.0	2.5	2.7	3.1	3.4	3.2	3.0	3.1	...a	2.5	2.0	...
24	...	1.9	2.5	2.8	...a	3.3	3.1	3.2	2.9	2.9	2.5	2.1	...
25	...	2.0	2.5	...c	...c	...c	...c	3.1	3.0	2.5	2.5	2.0	...
26	...	1.9	2.4	2.6	3.1	3.0	3.0	3.0	3.0	2.9	2.5	1.8	...
27	...	1.8	2.4	...c	3.1	3.2	3.2	3.1	...c	...c	2.5	1.8	...
28	...	2.0	2.5	2.7	2.8	...a	3.2	3.0	3.1	2.9	2.6	1.8	...
29	...	2.0	2.5	2.7	2.8	3.0	3.1	2.9	2.9	2.8	2.5	...a	...
30	...	1.9	2.3	2.8	2.9	2.9	3.1	...a	3.1	2.7	2.4	1.7	...
31													
MEAN*	...	2.0	2.5	2.8	3.0	3.1	3.2	3.1	3.1	2.8	2.6	2.1	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 239

MAY 1943 | MAY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.5	3.5	3.7	4.0	4.3	3.7	3.7	4.9	5.8	6.5	7.3	7.7	p7.2	7.2	8.7	9.4	8.3	7.5	5.3	3.9	2.8	3.2	3.1	...a	...
2	...o	...c	3.2	3.1	2.7	2.8	2.5	...c	...c	4.5	4.7	5.1	5.2	5.0	5.0	5.1	4.7	4.2	3.6	2.3	1.5	1.4	...a	1.5	...
3	1.5	1.6	1.8	1.9	2.1	1.7	1.8	4.3	5.4	...c	...c	...c	...c	6.1	6.2	5.9	5.5	4.8	3.5	2.0	2.0	2.2	2.3	2.5	...
4	2.6	2.7	2.9	3.3	2.8	...c	3.1	4.0	5.4	...c	...c	6.2	p5.7	5.8	6.6	7.2	6.1	5.2	3.8	2.4	2.0	2.1	2.4	2.3	...
5	2.4	2.6	2.4	2.6	3.1	2.1	2.1	4.3	5.9	5.8	6.8	7.3	6.6	6.1	7.2	7.7	7.2	5.6	3.8	3.0	2.3	2.4	2.5	2.6	4.4
6	2.7	2.8	3.1	3.3	3.3	2.7	2.5	4.8	5.9	5.9	6.6	...c	...c	7.2	7.6	...c	6.6	5.9	3.9	2.8	2.8	2.7	2.8	3.0	...
7	3.2	3.3	3.6	3.6	3.8	3.3	2.5	4.7	6.3	...c	...c	7.0	6.4	...c	7.9	7.1	7.2	5.6	4.7	2.6	2.8	3.0	3.3	3.5	...
8	3.7	3.7	3.7	4.0	4.1	3.7	3.2	4.5	5.2	5.6	6.3	6.6	6.1	6.3	6.5	6.8	...c	p5.3	4.3	3.1	p3.1	3.7	3.9	3.5	...
9	3.5	3.6	3.9	4.0	4.3	3.6	3.2	4.8	5.4	...c	...c	...c	...c	...c	...c	...c	...c	...c	3.8	3.0	3.1	3.2	3.6	3.5	...
10	3.4	3.6	3.8	3.9	4.1	4.1	3.6	4.7	...c	...c	...c	...c	...c	...c	...c	7.4	6.5	5.5	4.0	2.8	3.2	3.5	3.4	3.2	...
11	3.3	3.5	3.6	3.8	3.5	3.2	3.0	4.6	5.6	6.0	7.0	8.6	8.0	7.0	7.6	p8.2	6.5	5.7	4.5	3.1	...c	2.5	2.8	3.0	...
12	3.2	3.4	3.8	3.7	4.0	2.5	2.9	4.5	6.3	6.6	6.9	8.8	7.1	7.5	p7.9	...c	...c	5.8	4.5	4.1	3.8	3.9	3.9	4.4	...
13	4.5	4.2	p4.5	4.4	4.8	4.3	4.2	5.0	6.2	6.1	7.6	7.7	6.8	6.1	...c	...c	7.3	6.1	5.5	4.7	...c	4.3	...c	...c	...
14	...c	...c	...c	...c	...c	...c	2.8	...c	5.8	6.7	7.5	p8.4	6.3	7.6	7.4	7.7	5.9	5.3	3.5	3.6	3.6	3.5	4.2	4.6	...
15	4.7	4.4	4.2	4.2	4.6	4.1	3.3	4.2	5.4	7.1	7.3	6.9	7.7	8.6	9.1	9.6	8.0	9.2	4.9	3.9	2.8	3.3	3.0	3.5	5.6
16	3.6	3.5	3.5	4.1	4.1	3.1	2.9	4.5	6.5	5.3	7.1	7.9	7.5	6.9	6.7	8.0	7.6	6.6	4.4	3.4	3.5	3.1	3.3	3.4	5.0
17	3.5	3.4	3.4	3.5	3.4	3.1	3.0	4.7	6.0	7.0	6.8	7.1	7.7	7.5	9.0	8.1	8.0	7.7	3.7	3.1	2.9	3.1	3.3	3.4	5.1
18	3.5	3.8	3.9	4.4	4.4	3.0	2.9	4.5	5.7	7.5	7.8	7.8	9.1	9.3	9.7	10.4	9.3	7.0	3.8	3.0	3.1	3.6	2.5	3.0	5.5
19	3.5	3.3	...a	2.6	2.8	3.0	2.9	4.2	5.9	6.8	7.2	7.0	7.3	p8.0	8.2	9.1	7.4	7.3	4.4	2.5	2.4	2.7	3.1	3.3	...
20	3.4	3.3	3.3	3.6	3.3	2.4	2.5	4.7	5.4	...c	...c	...c	...c	...c	p8.1	...c	7.1	5.7	4.1	3.0	2.7	...a	...a	...f	...
21	3.4	3.5	3.6	3.7	3.8	2.6	2.4	4.4	5.6	5.9	6.8	7.0	6.2	6.6	6.4	7.1	7.8	5.2	3.7	2.7	2.8	2.4	2.3	2.7	4.5
22	3.1	3.4	3.7	4.1	4.0	3.7	3.1	4.7	6.1	6.1	6.0	6.0	p6.4	6.9	6.7	8.4	6.2	6.2	4.1	2.5	2.4	2.9	3.3	3.5	4.7
23	3.7	3.8	4.0	3.9	p3.8	...c	2.7	p5.0	5.2	5.8	6.0	6.5	4.1	3.5	6.9	7.0	6.8	7.2	...c	2.7	...c	2.9	2.8	3.1	...
24	3.3	...c	...c	...c	...c	...c	...c	...c	5.5	5.6	...c	6.3	6.3	7.7	7.1	6.2	6.9	6.1	4.6	3.4	3.3	3.4	3.6	3.5	...
25	3.6	3.9	3.8	4.0	4.8	2.7	2.4	4.4	6.0	6.6	6.5	7.2	p7.3	p7.1	6.9	7.0	...c	6.5	4.3	3.5	3.3	3.7	4.1	4.2	...
26	4.3	4.2	4.6	4.5	4.0	3.5	2.1	4.1	6.5	6.0	7.0	7.2	6.3	6.2	6.8	6.8	6.0	5.8	4.0	3.4	2.7	3.7	3.9	3.6	4.9
27	3.9	3.8	4.1	4.2	4.6	4.0	3.2	3.9	...c	5.9	6.6	6.7	6.9	6.8	6.3	7.8	7.7	5.8	4.5	3.7	2.7	2.5	3.1	2.6	...
28	2.7	...f	2.8	3.0	3.2	2.5	2.5	2.9	5.8	6.9	6.5	6.3	6.2	6.8	7.2	8.6	8.0	6.3	5.4	5.8	2.6	2.7	3.2	3.3	...
29	2.8	2.9	3.4	3.3	3.7	3.7	2.4	4.0	5.5	...c	...c	...c	7.4	6.6	8.0	6.7	6.3	5.5	3.6	3.2	3.0	3.1	3.3	3.4	...
30	3.3	3.2	3.6	3.5	3.9	3.6	3.2	4.4	5.8	6.0	6.3	7.1	6.4	6.0	6.7	6.8	6.7	5.5	3.7	2.0	2.5	3.0	3.4	3.4	4.6
31	3.3	3.6	3.6	3.8	3.7	3.4	2.6	4.0	5.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...o	...
MEAN*	3.4	3.4	3.6	3.7	3.8	3.2	2.8	4.4	5.8	6.2	6.8	7.1	6.7	6.8	7.4	7.6	7.0	6.1	4.2	3.2	2.8	3.0	3.2	3.2	4.7

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 240

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1943 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS MAY 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	240	240	270	235	245	240	230	215	230	260	260	p270	280	290	260	235	210	200	210	270	220	240	...a	...
2	270	...a	260	270	...a	230	260	250	240	320	400	370	350	350	340	280	240	230	220	230	260	...a	...a	310	...
3	...a	...a	290	280	240	215	240	230	250	...c	...c	...c	...c	240	240	270	230	230	210	210	270	270	260	270	...
4	290	260	230	250	230	...c	230	220	210	...c	...c	270	290	300	290	260	230	200	200	220	250	250	240	240	...
5	240	280	230	220	210	200	240	220	240	200	250	280	230	260	290	250	240	220	210	220	240	260	240	260	239
6	270	290	250	230	210	220	220	230	230	210	240	...c	...c	290	270	...c	220	210	200	210	230	220	240	260	...
7	250	250	220	240	220	200	230	220	220	...c	...c	...c	...c	...c	p260	240	230	210	200	...a	220	...a	240	250	...
8	230	240	240	240	230	210	210	220	220	200	270	250	p250	250	230	250	...c	210	210	220	p230	230	220	220	...
9	250	250	240	230	230	200	210	210	220	...c	...c	...c	...c	...c	...c	...c	...c	230	200	220	190	220	230	210	...
10	260	260	240	250	230	220	190	200	200	170	210	...c	...c	...c	...c	240	210	200	190	...a	...a	...a	220	230	...
11	250	...c	...c	...c	...c	...c	...c	...c	...c	220	250	240	240	270	270	p225	210	210	200	190	...c	...a	230	250	...
12	250	250	260	230	220	180	200	190	230	220	240	250	280	280	p290	...c	...c	210	210	200	220	240	230	270	...
13	220	220	210	220	210	230	200	210	200	220	270	225	260	...a	...c	...c	240	230	210	210	...c	230	210	240	...
14	220	250	230	240	220	210	220	210	220	210	270	250	250	260	270	230	240	200	...a	230	230	190	210	230	...
15	240	230	230	230	220	200	210	210	220	250	230	270	290	280	280	260	230	190	230	230	230	270	240	270	239
16	250	230	230	220	220	...a	...a	220	230	200	250	260	270	250	270	250	240	210	200	220	220	280	240	280	...
17	240	230	230	240	250	280	230	210	220	240	230	230	270	270	270	250	220	200	...a	260	220	270	250	230	...
18	260	240	...a	230	200	240	250	230	230	250	270	280	250	260	300	260	250	220	200	260	270	220	280	280	...
19	240	200	...a	...a	250	230	230	230	220	240	250	280	270	280	290	250	230	220	200	270	230	250	270	290	...
20	260	240	240	220	200	260	240	220	230	250	260	270	...c	280	260	260	230	220	200	240	270	...a	...a	...f	...
21	250	220	250	250	230	280	290	250	210	230	270	250	270	260	280	230	240	200	220	240	220	210	240	260	244
22	250	250	250	250	230	200	210	220	220	230	260	250	p250	240	270	230	200	200	200	210	240	240	230	240	232
23	240	270	270	250	270	...c	220	220	...c	...c	...c	...c	...c	...c	300	...c	...c	240	210	220	220	220	280	270	...
24	290	270	270	250	250	220	220	200	...c	220	...c	270	290	280	230	260	245	200	215	200	225	240	210	230	...
25	250	265	275	255	215	200	...a	225	245	225	295	290	p270	...c	255	260	245	225	225	235	245	260	240	260	...
26	245	235	245	225	225	235	310	235	240	245	285	245	265	285	270	240	235	195	195	190	200	265	225	245	241
27	235	260	245	245	235	195	200	240	...c	245	260	245	260	280	265	255	230	195	200	220	220	265	240	225	...
28	255	255	255	260	245	210	250	220	240	250	240	...a	290	280	285	250	235	225	210	...a	240	240	300	220	...
29	250	215	240	250	240	215	195	225	225	...c	...c	...c	260	295	260	250	230	210	220	250	215	245	215	225	...
30	215	230	230	220	230	220	215	230	240	240	270	260	260	270	270	250	250	210	200	...a	205	250	240	230	...
31	250	240	250	225	210	205	220	230	225	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
MEAN*	248	245	245	241	228	220	228	222	226	230	262	263	269	275	274	250	232	212	207	224	233	242	240	250	240

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 241

MAY 1943 | MAY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.4	4.2	p4.4	4.2	4.2	4.0	...	...	...
2	...	...	...	3.8	4.0	4.0	4.0	4.1	4.0	3.7	3.1	...	...
3	...	...	...	...	...c	...c	...c	4.1	4.1	3.6	3.3	...	...
4	...	...	...	...	...	4.2	4.3	3.9	3.7	3.8	...	...	...
5	...	...	...	...	4.2	4.2	4.2	4.2	4.0	3.9	...	...	...
6	...	...	...	...	4.0	...c	...c	4.3	4.0	...	...	...	...
7	...	...	...	...	...c	4.3	4.3	...c	4.2	3.9	...	...	...
8	...	...	...	...	4.1	4.2	p4.2	4.3	...c	3.9	...c	...	...
9	...	...	...	...	...c	4.4	4.4	4.2	4.3	4.0	...	...	...
10	...	...	...	...	...c	...c	...c	...c	...c	3.6	...	...	...
11	...	...	...	...	4.2	4.3	4.3	4.4	4.3	p3.9	...	...	...
12	...	...	...	...	4.3	4.2	4.3	4.3	p4.3	...c	...	...	...
13	...	...	...	...	4.3	4.3	4.3	...a	...c	...c	...	...	...
14	...	...	...	...	4.2	4.2	...a	...a	4.2	...a	...	...	...
15	...	...	...	...	4.2	4.3	4.3	4.3	4.3	3.5	...	...	...
16	...	...	...	...	...	4.3	4.4	4.3	4.3	3.6	...	...	...
17	...	...	...	...	4.0	...a	4.3	4.3	4.0	3.9	...	...	...
18	...	...	...	3.8	4.2	4.1	3.8	3.7	4.4	...a	...a	...	...
19	...	...	...	3.8	4.2	4.2	4.2	4.4	4.2	3.9	...	...	...
20	...	...	...	4.0	4.0	4.2	...c	4.3	4.2	4.0	...	...	...
21	...	...	...	...	...	4.3	4.3	4.2	4.2	4.0	...	...	...
22	...	...	...	...	4.0	4.4	4.3	4.2	4.0	...	...	...	...
23	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
24	...	...	...	...	...c	3.1	4.1	4.0	3.9	...	...	...	...
25	...	...	...	...	4.3	4.2	p4.2	...c	...c	3.7	...	...	...
26	...	...	...	...	4.0	4.1	4.2	4.1	4.0	3.8	...	...	...
27	...	...	...	...	4.0	4.2	4.2	4.2	4.1	3.8	...	...	...
28	...	...	...	...	3.8	...a	4.1	4.1	4.0	...	...	...	...
29	...	...	...	...	...c	...c	4.0	4.2	4.1	...h	...	...	...
30	...	...	...	...	4.0	...h	4.0	4.0	4.1	3.8	...	...	...
31	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
* MEAN	...	...	...	3.8	4.1	4.2	4.2	4.2	4.1	3.8	3.2	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	220	200	p200	220	240	230	...	...	...
2	...	...	...	220	300	210	200	220	220	210	220	...	...
3	...	...	...	...	...c	...c	...c	200	200	200	200	...	...
4	...	...	...	...	...	200	200	200	170	190	...	...	...
5	...	...	...	...	230	210	200	200	...c	230	...	...	...
6	...	...	...	...	200	...c	...c	210	210	...c	...	...	...
7	...	...	...	...	...c	...c	...c	...c	240	230	...	...	...
8	...	...	...	...	230	230	p210	190	...c	...c	230	...	...
9	...	...	...	220	230	220	210	220	...c	210	...	...	...
10	...	...	...	...	...c	...c	...c	...c	...c	210	...	...	...
11	...	...	...	...	230	210	200	210	200	p200	...	...	...
12	...	...	...	...	210	200	210	210	p210	...c	...	...	...
13	...	...	...	...	230	220	...a	...a	...c	...c	...	...	...
14	...	...	...	...	230	200	...a	...a	...a	...a	...	...	...
15	...	...	...	...	230	220	200	210	260	210	...	...	...
16	...	...	...	...	...	220	220	220	210	220	...	...	...
17	...	...	...	...	220	...a	220	210	220	210	...	...	...
18	...	...	...	220	210	200	190	...a	200	...a	...a	...	...
19	...	...	...	210	220	220	220	200	210	220	...	...	...
20	...	...	...	230	220	200	...c	200	220	210	...	...	...
21	...	...	...	...	...	230	220	220	220	240	...	...	...
22	...	...	...	...	210	220	220	230	200	...	...	...	...
23	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
24	...	...	...	...	...c	210	250	245	230	...	...	...	...
25	...	...	...	...	235	220	p220	...c	...c	205	...	...	...
26	...	...	...	...	235	225	225	220	...	...	...	...	...
27	...	...	...	...	240	215	...	185	...a	...	...	...	...
28	...	...	...	...	215	...a	195	250	235	...	...	...	...
29	...	...	...	...	...c	...c	220	225	220	...h	...	...	...
30	...	...	...	...	...h	...h	210	200	235	235	...	...	...
31	...	...	...	...	...	...	...	...	...	...	...	...	...
* MEAN	...	...	...	220	227	213	211	213	218	215	217	...	...

* = ALL TABULATED VALUES　a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E　b = LOSS OF RECORD DUE TO ABSORPTION　c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER　e = BELOW LOWER LIMIT OF RECORDER　f = SPREAD ECHOES PRESENT　g = f°F2 EQUAL TO OR LESS THAN f°F1　h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY　k = IONOSPHERIC STORM IN PROGRESS　p = INTERPOLATED VALUE　q = DOUBTFUL VALUE

TABLE 242

MAY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.6	0.6	0.6	0.6	p0.7	0.7	0.9	0.9	0.7	0.6	...
2	...	0.6	0.6	0.6	0.6	0.8	0.8	0.9	0.8	0.9	0.7	0.6	...
3	...	...e	0.8	...c	...c	...c	...c	0.7	0.8	0.7	0.6	0.7	...
4	...	0.6	0.6	...c	...c	0.8	0.6	0.6	0.6	0.6	0.6	0.6	...
5	...	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
6	...	0.6	0.6	0.6	0.7	...c	...c	0.8	0.7	...c	0.6	...e	...
7	...	...e	0.6	...c	...c	...c	...c	...c	0.7	...e	0.5	0.7	...
8	...	...e	0.5	0.5	0.5	0.6	0.5	0.7	0.8	0.5	0.7	...e	...
9	...	...e	...e	0.7	0.7	0.8	0.9	0.8	...c	0.8	0.7	0.7	...
10	...	0.9	...c	0.7	0.7	...c	...c	...c	...c	0.6	0.7	0.7	...
11	...	...c	0.7	0.6	0.6	0.7	0.7	0.9	0.7	0.6	0.5	0.7	...
12	...	0.5	...e	0.6	0.7	0.9	0.7	0.7	p0.6	...c	...c	0.6	...
13	...	...e	...e	0.7	0.7	0.7	0.7	0.7	...c	...c	0.6	...e	...
14	...	...e	...e	...e	0.7	0.5	0.7	0.8	0.7	0.7	0.5	...	...
15	...	...e	...e	...e	0.8	0.8	0.9	0.7	0.7	0.8	0.7	...	...
16	...	...e	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	...
17	...	...e	...e	0.7	0.8	0.9	1.0	0.7	0.7	0.7	0.7	...	...
18	...	...e	...e	0.5	0.7	0.7	0.8	0.8	0.7	0.6	0.7	...e	...
19	...	...e	...e	0.7	0.7	0.7	0.9	0.7	0.7	0.6	...e	...e	...
20	...	...e	0.5	0.7	0.8	0.7	0.8	0.7	0.7	0.7	...e	...e	...
21	...	...c	...c	...e	0.7	0.8	0.8	0.8	0.7	0.7	...e	...e	...
22	...	...e	...e	...e	0.7	0.7	0.8	0.7	0.7	0.7	...e	...	...
23	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
24	...	...c	...c	...c	...c	0.7	0.7	0.8	0.7	0.7	0.7	...e	...
25	...	...e	0.7	0.7	0.7	0.8	0.7	...c	...c	...c	...c	...e	...
26	...	...e	0.7	0.8	0.8	0.9	...c	...c	...c	0.7	0.8	...	...
27	...	...e	...c	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.6	...	...
28	...	...c	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.7	...e	...e	...
29	...	...e	0.7	...c	...c	...c	0.9	0.8	0.8	0.7	0.6	...e	...
30	...	...e	0.7	0.7	0.7	0.8	0.8	0.8	0.6	0.7	0.7	...	...
31	...	...e	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...	...
MEAN*	...	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.7	2.3	2.7	2.8	3.0	p3.0	3.0	2.9	2.7	2.2	1.7	...
2	...	1.8	2.0	2.8	2.7	2.9	3.0	3.0	2.8	2.7	2.3	2.1	...
3	...	1.6	2.2	...c	...c	...c	...c	3.2	2.7	2.8	2.4	2.0	...
4	...	2.0	2.2	...c	...c	2.9	3.1	3.2	2.9	2.7	2.3	2.4	...
5	...	2.0	2.5	2.5	2.9	3.1	3.0	3.3	3.2	2.9	2.4	1.8	...
6	...	1.9	2.3	2.6	3.0	...c	...c	3.2	3.3	...c	2.4	1.7	...
7	...	1.9	2.5	...c	...c	3.3	...c	...c	3.3	2.8	2.4	1.6	...
8	...	1.9	2.3	2.6	3.0	3.3	3.3	3.2	3.3	...c	2.4	1.6	...
9	...	1.8	2.3	3.0	3.1	3.3	3.2	3.3	...c	...c	2.6	2.0	...
10	...	1.9	2.0	2.7	3.3	...c	...c	...c	...c	2.8	2.4	1.7	...
11	...	1.8	2.7	2.8	3.3	3.3	3.3	3.3	3.4	p3.2	2.4	1.8	...
12	...	1.8	2.6	3.0	2.9	3.3	3.2	3.1	p3.1	...c	...c	2.0	...
13	...	1.5h	2.5	2.8	2.9	3.3	3.2	...a	...c	...c	2.5	1.8	...
14	...	1.8	2.5	2.7	2.9	3.1	3.1	3.0	2.6	...a	2.4	...	...
15	...	1.8	2.5	2.8	3.0	3.0	3.1	2.9	2.9	2.5	3.3	...	...
16	...	1.8	2.7	2.7	2.8	3.0	3.3	3.3	2.6	2.7	2.3	1.8	...
17	...	2.1	2.3	2.7	2.9	2.9	2.6	...a	2.9	2.8	2.3	...	...
18	...	2.0	2.6	2.8	2.9	3.0	3.2	3.3	2.8	...a	...a	...a	...
19	...	1.6	2.3	2.6	3.0	2.8	...a	...a	2.9	2.7	2.2	1.8	...
20	...	1.6	2.1	2.9	2.9	3.0	2.9	2.9	2.9	2.8	2.3	1.7	...
21	...	...c	2.6	2.9	3.1	3.3	3.1	3.0	2.5	2.5	2.4	...	...
22	...	1.8	2.6	2.7	2.8	3.0	3.3	3.1	2.9	3.3	2.3	...	...
23	...	2.0	...c	2.7	3.1	3.1	...c	...c	2.9	2.9	2.3-	...c	...
24	...	1.6	2.2	2.6	...c	2.9	3.0	3.1	2.8	2.6	2.4	1.6	...
25	...	1.8	2.3	2.5	2.7	2.9	p3.0	2.9	2.9	2.7	...c	1.6	...
26	...	1.8	2.5	2.8	2.7	2.8	2.9	2.9	2.9	2.7	2.2	...	...
27	...	1.9	...c	2.5	2.7	2.8	2.8	2.8	...a	2.7	2.6	...	...
28	...	1.5	2.1	2.5	2.7	2.4	3.0	3.0	2.8	2.6	2.2	...a	...
29	...	1.6	1.7	...c	...c	...c	2.9	2.9	2.9	2.5	2.3	1.7	...
30	...	1.5	2.3	2.6	2.7	2.7	3.0	3.0	2.8	2.5	2.1	...	...
31	...	...a	2.1	...c	...c	...c	...c	...c	...c	...c	...c	...	...
MEAN*	...	1.8	2.3	2.7	2.9	3.0	3.1	3.1	2.9	2.7	2.4	1.8	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 243

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1943 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND JUNE 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.8	7.0	6.5	7.8	...c	...c	...c	5.5	4.9	...c	...c	3.4	3.0	3.3	3.5	...
2	3.5	3.4	3.4	3.6	3.4	2.9	2.5	4.5	5.1	5.5	6.5	5.8	6.3	6.2	6.1	6.6	5.9	5.7	3.6	2.3	2.5	2.9	2.7	3.2	4.3
3	3.3	3.3	3.4	3.5	3.7	3.5	3.3	4.1	5.1	5.6	6.1	5.0	p6.8	5.8	6.3	6.5	6.3	5.5	3.9	3.0	2.9	2.4	2.5	2.7	4.4
4	3.0	3.0	3.3	3.2	3.3	3.2	2.8	3.6	4.6	5.4	6.1	6.3	5.6	6.3	5.8	5.4	5.5	5.8	3.8	2.9	3.1	3.3	3.0	2.7	4.2
5	2.9	3.1	3.4	3.7	3.6	3.6	3.1	4.3	5.2	...c	4.9	5.8	5.8	5.9	6.3	5.4	5.4	5.4	3.7	2.7	3.0	3.3	3.5	3.2	...
6	3.1	3.2	3.4	3.6	3.4	3.5	2.8	4.1	4.9	6.0	5.3	6.5	6.0	6.9	5.9	5.9	5.1	5.2	4.5	2.9	2.9	2.9	3.3	3.3	4.4
7	3.0	3.0	3.3	2.9	3.3	2.8	2.5	3.7	4.9	5.3	6.0	5.8	6.2	5.9	5.1	5.9	7.1	6.6	3.6	3.4	2.6	3.1	3.3	3.0	4.3
8	3.1	2.8	2.7	2.7	3.1	3.1	2.8	2.1	6.2	5.9	5.8	p5.6	...c	...c	5.7	6.6	6.7	7.3	7.2	3.8	2.3	2.8	3.0	3.3	...
9	3.5	3.9	3.3	2.9	3.0	3.2	1.9	4.2	4.9	6.5	7.2	6.3	7.6	6.2	5.8	7.0	6.0	5.4	3.5	3.0	2.7	3.1	3.3	3.3	4.5
10	3.4	3.3	3.1	3.4	3.3	3.1	2.4	3.7	5.8	p5.9	6.5	7.1	6.6	6.4	6.5	7.0	6.4	5.2	3.4	2.6	2.5	3.1	3.3	3.5	4.5
11	3.3	3.5	4.0	3.7	4.3	3.5	2.8	p4.0c	5.4	...c	...c	...c	...c	...c	...c	...c	6.1	4.9	3.3	2.7	2.8	3.0	2.8	3.0	...
12	3.0	3.1	3.2	2.8	2.8	2.8	...c	...c	...c	6.3	5.7	6.3	p6.2c	6.2	6.4	7.3	5.5	5.8	4.4	2.9	3.4	2.9	2.9	3.1	...
13	3.4	3.5	3.4	3.4	3.9	3.4	2.8	3.5	5.7	5.7	6.1	...c	...c	...c	...c	...c	...c	5.5	p4.1	p3.6a	3.4	3.4	3.4	3.4	...
14	3.4	3.3	3.4	3.4	3.5	2.9	3.1	4.0	5.6	5.9	6.8	p6.7c	6.6	6.5	6.1	6.5	6.1	5.6	3.8	3.0	3.5	3.6	3.8	3.5	4.6
15	3.4	3.6	3.3	3.0	3.4	3.6	3.2	4.2	5.8	5.9	6.0	6.4	6.0	6.3	7.2	6.9	5.5	4.4	3.8	2.7	2.7	3.0	3.1	3.2	4.4
16	3.3	3.2	3.5	3.4	3.6	3.2	3.2	3.9	4.8	5.5	5.5	6.1	6.2	5.5	6.2	6.0	5.5	5.5	3.7	2.8	3.1	3.4	3.4	3.0	4.3
17	2.7	2.8	2.8	2.9	3.7	2.3	2.1	3.8	4.7	4.9	5.3	p6.6	6.4	6.0	6.5	6.0	7.4	4.5	3.0	p3.4	2.9	2.5	3.3	3.3	4.2
18	3.2	3.2	3.8	3.5	...f	3.2	2.4	3.5	4.8	5.5	5.4	6.1	6.4	5.6	6.6	5.9	6.1	5.2	3.3	2.9	2.8	3.0	3.4	4.0	...
19	...f	...f	3.1	4.5	4.0	3.2	3.0	3.7	5.1	...c	...c	...c	...c	5.5	6.3	5.8	5.6	5.2	4.5	2.6	2.6	2.9	3.4	3.6	...
20	3.8	3.6	3.9	3.8	4.1	4.0	3.3	4.1	5.7	5.7	5.7	6.7	7.7	7.8	6.1	5.4	5.8	5.1	3.5	3.1	3.1	3.5	3.7	3.6	4.7
21	3.9	4.0	3.9	4.0	3.8	3.9	3.3	3.8	5.2	5.6	5.8	5.3	7.1	p6.5	p6.2	p6.7	p6.2	p6.2	4.0	3.1	3.5	3.1	3.4	3.9	4.7
22	3.9	3.6	3.5	3.2	p3.4	3.2	3.0	3.4	p5.2	6.4	5.5	p5.9	5.8	p6.8	6.6	6.2	5.9	6.0	3.0	2.2	2.4	2.7	3.3	3.1	4.3
23	3.1	...f	3.1	2.7	3.3	2.6	2.0	3.3	4.7	4.8	6.0	6.3	6.1	6.6	6.4	...c	6.1	5.0	3.6	2.9	2.7	2.9	3.2	3.4	...
24	3.5	3.9	3.7	3.8	2.9	2.4	2.4	3.3	5.3	6.8	5.5	5.1	5.9	6.3	5.5	6.6	6.7	6.1	4.4	3.0	2.8	2.5	2.9	2.8	4.3
25	3.1	3.2	3.7	3.3	3.2	2.6	2.7	3.3	...c	5.5	6.0	6.6	6.3	5.2	6.5	6.6	5.2	4.7	3.3	2.2	3.0	3.2	3.5	2.9	...
26	2.9	3.2	3.3	2.9	3.0	2.6	2.6	3.2	4.8	4.8	5.3	5.2	6.4	5.3	6.5	5.8	5.6	4.8	4.3	3.6	2.1	3.0	3.3	3.0	4.1
27	3.1	3.1	3.1	3.3	3.3	3.1	2.9	3.4	5.2	5.1	5.7	6.1	5.5	5.5	5.9	6.1	5.6	5.0	3.8	2.3	2.6	3.1	2.9	3.1	4.1
28	3.2	3.2	3.1	2.9	3.3	1.8	1.9	3.1	5.2	6.0	6.5	5.9	5.5	5.0	5.9	6.0	5.2	5.0	4.3	3.3	2.4	3.3	3.3	2.9	4.1
29	2.9	3.3	3.3	3.5	3.7	3.3	3.3	4.0	4.8	5.6	6.3	5.1	6.2	5.5	5.2	6.2	4.8	5.0	3.8	3.3	2.9	3.1	3.5	3.8	4.3
30	3.8	3.8	3.6	4.0	3.4	3.1	2.7	3.3	4.2	5.4	5.8	5.2	5.5	5.5	6.2	4.8	5.5	5.0	3.6	2.5	2.7	3.0	3.1	2.7	4.2
31																									
MEAN*	3.3	3.3	3.4	3.4	3.4	3.1	2.7	3.7	5.1	5.7	5.9	6.0	6.3	6.0	6.1	6.2	5.9	5.4	3.9	2.9	2.8	3.0	3.2	3.2	4.3

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY.   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 244

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1943 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	...c	240	250	245	220	...c	...c	...c	235	205	...c	...c	225	235	215	215	...
2	225	245	260	235	225	245	250	215	185	255	255	260	295	265	270	240	235	205	190	265	245	230	235	280	242
3	235	230	220	205	205	220	215	200	295	215	270	295	p200	285	300	265	215	210	190	235	200	200	260	235	230
4	240	265	235	245	230	225	195	225	225	235	270	260	270	275	285	225	225	235	200	215	215	235	195	215	235
5	225	240	225	225	235	220	205	215	220	...c	240	245	265	280	245	215	225	200	180	195	230	205	225	225	...
6	225	230	230	235	205	190	175	190	215	200	185	260	270	285	240	235	200	220	190	185	240	...a	220	...a	...
7	230	255	230	225	215	205	215	215	235	225	250	250	285	285	480	300	...g	200	180	...a	265	260	225	245	...
8	240	235	245	225	235	220	220	235	220	200	260	p195	...c	...c	190	250	250	225	195	195	...a	250	270	215	...
9	265	225	225	265	250	200	...f	225	230	215	250	240	260	265	265	260	...a	195	225	...a	...a	...a	265	255	...
10	215	225	230	245	215	225	180	185	235	230	270	235	245	270	265	240	240	210	190	190	...a	240	245	245	...
11	220	235	230	240	220	...a	205	...c	225	...c	...c	...c	...c	...c	...c	...c	215	190	200	265	...a	...a	...a	...a	...
12	295	285	255	220	265	205	...c	...c	...c	250	260	260	270	255	240	220	230	185	230	210	...a	...a	...a	...a	...
13	...a	...a	240	250	230	210	215	230	210	230	225	...c	...c	...c	...c	...c	...c	...a	...a	...c	...a	255	230	230	...
14	250	240	250	220	225	220	220	...c	225	...c	...c	...c	...c	...c	...c	...c	...c	210	210	250	240	240	230	270	...
15	260	220	210	250	250	235	225	220	230	240	250	285	300	280	270	250	220	205	210	220	220	230	240	235	240
16	240	230	220	215	220	215	210	210	220	220	250	260	255	230	265	240	225	200	200	230	215	225	220	215	226
17	265	240	250	230	215	210	230	205	190	180	150	p250	280	150	250	220	205	195	...a	p190	...a	...a	225	250	...
18	240	230	220	230	220	210	200	210	210	230	180	280	250	...a	230	220	...a	...a	...a	...a	...a	...a	200	235	...
19	...f	...f	240	250	220	210	235	210	220	...c	...c	...c	...c	315	240	...g	240	220	190	180	180	255	230	235	...
20	220	235	215	260	235	215	230	220	170	190	210	260	280	255	240	215	220	215	230	220	220	225	220	225	226
21	230	230	200	235	250	205	205	220	225	235	270	240	250	p250	290	p280	p230	p225	...a	215	200	265	240	260	...
22	220	225	220	235	260	200	200	230	p230	240	220	p250	280	p255	280	250	225	210	220	200	240	265	...a	250	...
23	250	220	265	290	240	200	270	225	230	235	250	265	275	265	250	...c	240	200	205	220	210	225	230	255	...
24	270	250	245	215	205	195	235	225	240	250	220	205	250	265	285	285	205	225	190	215	200	200	280	240	233
25	255	245	240	220	230	250	210	215	...c	265	220	230	260	215	280	235	220	200	215	295	...a	230	240	230	...
26	210	225	210	215	230	205	200	225	225	225	220	200	240	210	270	240	200	205	190	180	...a	240	225	275	...
27	235	235	230	230	225	215	210	200	225	200	170	255	320	250	220	270	235	205	190	265	225	215	220	205	227
28	240	240	215	225	200	175	225	220	240	240	230	260	270	260	250	260	230	210	200	190	265	220	210	230	229
29	225	230	225	215	200	220	205	220	215	170	200	255	275	220	270	190	230	215	200	200	210	220	220	235	219
30	240	225	200	200	195	215	230	230	230	260	250	260	250	300	250	275	240	220	210	230	235	225	210	230	234
31																									
MEAN*	239	237	230	233	227	213	215	216	220	226	232	250	265	258	266	245	225	209	201	218	224	233	231	238	231

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 245

JUNE 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.0	4.1	...c	...c	4.1	3.9	...	...	...
2	...	...	...	...	4.0	4.2	4.2	4.1	4.0	3.7	...	...	...
3	...	...	...	...	...f	4.1	4.2	4.2	4.2	3.8	...	...	...
4	...	...	...	...	4.1	4.2	4.2	4.2	4.1	...	...	...	...
5	...	...	...	...	3.6	4.1	4.2	4.1	4.0	...	...	...	...
6	...	...	...	...	...	4.2	4.2	4.2	4.1	...	...	...	...
7	...	...	...	...	3.5	4.1	4.2	4.2	4.1	4.0	...	...	...
8	...	...	...	...	4.0	...	...c	...c	...	3.8	...	...	...
9	...	...	...	...	4.0	4.1	4.2	4.2	3.8	...	...	...	...
10	...	...	...	...	4.2	4.2	4.2	4.2	4.0	...	...	...	...
11	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
12	...	...	...	...	...	4.1	...c	3.9	4.0	...	...	...	...
13	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
14	...	...	...	...	4.1	...c	4.1	4.2	4.0	...	...	...	...
15	...	...	...	...	4.0	4.1	4.3	4.0	4.0	...	...	...	...
16	...	...	...	...	...	4.1	4.2	4.2	4.0	...	...	...	...
17	...	...	...	...	...	p4.1	p4.1	...	4.0	...	...	...	...
18	...	...	...	...	...	4.2	4.2	...a	3.8	...	...	...	...
19	...	...	...	...	...	...c	...c	4.2	4.0	...	...	...	...
20	...	...	...	...	...	4.2	4.3	4.1	3.9	...	...	...	...
21	...	...	...	...	4.2	4.0	4.2	4.0	4.0	p3.8	...	...	...
22	...	...	...	...	...	4.1	4.2	4.0	4.0	3.8	...	...	...
23	...	...	...	...	3.9	4.2	4.2	...h	4.0	...c	...	...	...
24	...	...	...	...	...	...	4.1	4.0	4.0	3.8	...	...	...
25	...	...	...	...	...	3.9	4.1	4.0	3.9	3.7	...	...	...
26	...	...	...	...	...	...	4.0	...	4.0	3.7	...	...	...
27	...	...	...	...	...	4.1	4.2	4.0	3.9	3.8	...	...	...
28	...	...	...	...	...	4.0	4.1	4.0	3.8	3.8	...	...	...
29	...	...	...	...	...	4.0	4.1	4.0	3.9	...	...	...	...
30	...	...	...	3.4	3.9	4.0	4.0	4.0	3.6	3.5	...	...	...
31													
* MEAN	...	...	...	3.4	4.0	4.1	4.2	4.1	4.0	3.8	...	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	240	225	...c	...c	250	230	...	...	...
2	...	...	...	...	230	240	215	195	230	215	...	...	...
3	...	...	...	...	...f	215	195	220	220	245	...	...	...
4	...	...	...	...	230	230	240	200	225	...	...	...	...
5	...	...	...	...	190	195	235	230	250	...	...	...	...
6	...	...	...	...	...	235	230	225	225	...	...	...	...
7	...	...	...	...	170	140	225	230	230	215	...	...	...
8	...	...	...	...	200	...	...c	...c	...	240	...	...	...
9	...	...	...	...	250	220	220	200	195	...	...	...	...
10	...	...	...	...	220	235	210	215	215	...	...	...	...
11	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
12	...	...	...	...	...	...h	...c	...a	210	...	...	...	...
13	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
14	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
15	...	...	...	...	230	210	210	215	...h	...	...	...	...
16	...	...	...	...	...	150	200	215	150	...	...	...	...
17	...	...	...	...	...	p230	270	...	220	...	...	...	...
18	...	...	...	...	...	220	230	...e	...a	...	...	...	...
19	...	...	...	...	...	...c	...c	225	200	...	...	...	...
20	...	...	...	...	...	225	...a	235	215	...	...	...	...
21	...	...	...	...	210	210	200	200	210	p220	...	...	...
22	...	...	...	...	...	160	200	190	180	210	...	...	...
23	...	...	...	...	175	235	200	...h	180	...c	...	...	...
24	...	...	...	...	...	...	235	215	230	200	...	...	...
25	...	...	...	...	...	220	200	220	200	230	...	...	...
26	...	...	...	...	...	...	210	...	195	220	...	...	...
27	...	...	...	...	...	205	170	220	220	195	...	...	...
28	...	...	...	...	...	225	210	220	185	250	...	...	...
29	...	...	...	...	...	210	190	220	210	...	...	...	...
30	...	...	...	230	215	195	...h	190	230	200	...	...	...
31													
* MEAN	...	...	...	230	213	220	214	214	211	220	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = $f^{0}F2$ EQUAL TO OR LESS THAN $f^{0}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

JUNE 1943

TABLE 246

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...c	...e	0.8	0.7	0.8	...e	0.6	0.7	0.7	...e	...
2	...	...	...e	...e	0.7	0.7	0.8	0.8	0.7	0.6	0.7	...	...
3	...	...	...e	...e	...e	...e	...e	0.5	0.6	0.7	0.5	...e	...
4	...	...	0.8	...e	0.5	0.7	0.7	0.8	0.8	...e	...e	...e	...
5	...	...	...e	...c	0.6	...e	0.7	0.7	0.5	...e	...e	...	...
6	...	...	...e	0.7	0.5	0.6	0.7	...e	...e	...e	...e	...	...
7	...	...	...e	...e	0.5	0.8	0.8	...e	...e	...e	...e	...	...
8	...	...	...e	0.7	0.7	p0.8	...c	...c	0.7	...e	...e	...e	...
9	...	...	0.8	...e	0.7	0.8	0.5	0.8	0.7	0.7	0.7	...	...
10	...	...	...e	...e	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.6	...
11	...	...	...e	...c	...c	...c	...c	...c	...c	...c	...e	...	...
12	...	...	...c	...e	0.6	0.8	...c	0.7	0.7	0.6	...e	...e	...
13	...	...	...e	...e	0.6	...c	...c	...c	...c	...c	...c	0.5	...
14	...	...	0.7	...e	0.7	...c	...c	0.8	0.7	0.6	...e	...e	...
15	...	...	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.5	...e	...e	...
16	...	...	...e	...e	0.7	0.6	0.7	0.8	0.7	...e	...e	...e	...
17	...	...	...e	0.6	0.7	p0.8	p0.6	0.7	0.7	0.7	0.7	0.8	...
18	...	...	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.6	...	...
19	...	...	...e	...c	...c	...c	...c	0.7	0.6	...e	...e	0.6	...
20	...	...	...e	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.8	...	...
21	...	...	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.6	...e	...
22	...	...	...e	0.7	0.8	0.8	0.8	0.8	0.6	0.6	0.8	0.8	...
23	...	...	0.7	...e	0.8	0.7	0.7	0.7	...e	...c	...e	...e	...
24	...	...	0.8	...e	0.7	0.8	0.6	...e	...e	...e	0.7	0.8	...
25	...	...	...c	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...
26	...	...	...e	...e	0.6	0.6	0.8	0.8	...e	0.7	...e	...	...
27	...	...	...e	...e	...e	...e	...e	...e	0.8	0.7	...e	...e	...
28	...	...	...e	...e	0.6	0.7	0.8	0.7	0.6	...e	0.8	...e	...
29	...	...	...e	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.8	...e	...
30	...	...	...e	0.5	0.7	0.8	0.7	0.6	0.6	0.5	...e	...e	...
31													
* MEAN	...	...	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	2.8	2.8	3.0	3.1	3.1	2.9	2.8	2.2	1.6	...
2	...	1.5	2.2	2.5	2.8	2.9h	3.0	3.0	2.8	2.6	2.3	...	...
3	...	1.6	2.5	2.6	3.1	3.2	3.1	3.1	3.0	2.9	2.3	1.5	...
4	...	1.6	2.1	2.6	2.9	3.1	3.3	2.9	3.0	2.7	2.1h	1.7	...
5	...	1.4	2.2	...c	2.9	3.0	3.0	2.9h	2.8	2.7	2.5h	...	...
6	...	1.5	2.3	2.6	2.8	3.0	3.0	3.1	3.2	2.6	2.4	...	...
7	...	1.6	2.3	2.9	2.8	3.0	3.1	3.0	3.0	2.7	2.5	...	...
8	...	...	2.1	2.5	2.8	p2.9	...c	...c	2.9	2.7	2.3	1.6	...
9	...	1.6	2.0	2.4	3.2	2.8	3.0	2.8	2.8	3.1	...a	...	...
10	...	1.6	2.4	p2.6	2.7	3.1	2.8	2.9	2.8h	2.5	2.5	1.6	...
11	...	1.8	2.4	...c	...c	...c	...c	...c	...c	...c	2.3	...	...
12	...	...c	2.6	2.8	2.7	3.0	...c	2.8	2.8	2.5	2.0	...a	...
13	...	1.5	2.0	2.5	2.8	...c	...c	...c	...c	...c	...c	...a	...
14	...	...	2.3	2.5	2.7	...c	...c	3.0	2.8	2.5	2.4	1.6	...
15	...	1.2	2.4	2.6	2.8	3.0	3.0	3.0	2.7	2.5	2.0	1.6	...
16	...	1.6	2.0	2.5	3.0	3.0	3.2	3.0	2.8	2.6	2.1	1.6	...
17	...	1.6	2.1	2.8	2.7	p3.0	p3.1	3.0	3.0	2.8	2.6	1.5	...
18	...	1.6	2.4	2.8	3.1	3.1	3.1	...a	...a	2.8	...a	...	...
19	...	1.6	2.1	...c	...c	...c	...c	2.8	2.7	...a	2.5	1.6	...
20	...	1.5	1.9	2.5	2.8	2.7	2.9	3.2	2.9	2.7	2.2	...	...
21	...	1.5	2.4	2.6	2.7	...a	2.8	2.8	2.8	2.5h	2.1	1.7	...
22	...	1.6	2.4	...h	2.7	3.0	...a	2.8	2.8	2.5	2.2	1.8	...
23	...	1.6	2.4	2.6	2.6	2.9	2.8	2.8	2.8	...c	2.4	1.8	...
24	...	1.5	2.4h	2.4	2.6h	2.7	2.8	2.7	2.6	2.5	2.3	1.3	...
25	...	...	...c	2.5	2.8	2.9	3.1	2.8	2.8	2.6	2.7	2.4	...
26	...	1.3	2.4	2.8	2.8	3.1	2.9	3.0	2.8	2.7	2.4	...	...
27	...	...	2.6	2.8	2.7	2.8	2.9	2.9	2.6	2.6	2.3	1.6	...
28	...	1.3	2.5	2.5	2.7	p2.9	2.9	2.9	2.8	3.0	2.2	1.6	...
29	...	1.6	2.1	2.4	2.8	2.8	2.9	2.9	2.8	2.5	2.5	1.6	...
30	...	1.2	2.3	2.5	2.7	2.8	2.9	2.9	2.8	2.5	2.0	1.5	...
31													
* MEAN	...	1.5	2.3	2.6	2.8	3.0	3.0	2.9	2.8	2.7	2.3	1.6	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 247

JULY 1943 | JULY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.0	2.9	2.8	3.3	3.7	3.0	2.8	3.8	5.0	5.6	5.6	5.7	5.2	5.7	5.1	5.4	5.8	4.8	2.9	2.5	2.7	2.9	3.0	3.2	4.0
2	3.6	3.4	3.5	3.4	3.5	3.0	2.6	3.2	4.8	4.2	4.8	5.6	5.4	5.5	6.0	5.6	5.3	5.2	2.8	2.9	3.0	3.3	3.8	3.4	4.1
3	3.3	3.4	3.2	3.1	3.0	2.5	2.6	2.8	3.9	5.6	5.7	5.5	5.3	5.6	6.2	6.4	5.9	6.6	4.4	2.7	3.0	3.0	3.3	3.6	4.2
4	3.6	p3.3f	3.0	3.5	3.9	2.4	2.6	3.5	4.4	5.5	4.9	5.2	5.8	5.8	5.4	5.3	4.8	4.4	3.3	2.6	2.7	3.1	3.3	3.4	4.0
5	3.3	3.4	3.5	3.5	3.5	...c	...c	...c	...c	...c	...c	6.0	6.9	7.3	7.3	6.2	6.1	5.5	3.8	2.0	2.2	3.0	3.3	2.8	...
6	3.0	3.6	3.7	4.2	3.4	2.9	2.0	3.4	5.1	5.4	6.0	5.2	5.4	6.3	6.0	4.8	5.9	5.2	3.0	p2.0c	2.8	3.1	3.9	3.3	4.2
7	...f	...f	...f	...f	...f	2.8	2.4	...c	...c	...c	...c	...c	...c	...c	...c	6.0	5.8	5.0	3.3	2.6	2.8	2.9	2.9	...c	...
8	3.5	3.6	3.3	2.7	3.0	2.8	2.4	3.6	4.5	5.3	5.1	5.5	5.5	5.1	5.1	5.7	5.4	5.5	3.8	2.6	2.8	2.8	2.7	3.0	4.0
9	3.2	3.3	3.3	3.6	3.4	2.3	2.0	3.3	4.9	5.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.2	2.3	2.7	3.1	...
10	3.2	3.4	3.4	3.4	4.0	3.0	2.3	3.1	4.8	5.0	6.0	5.8	6.2	7.0	6.1	6.1	6.1	5.0	3.6	2.8	2.7	2.7	3.0	3.7	4.3
11	3.4	3.7	3.6	3.6	3.6	3.6	3.0	3.6	5.1	5.7	5.5	...c	...c	...c	p6.0	...c	...c	6.0	p5.9	2.7	2.8	2.4	2.8	2.9	...
12	2.7	2.8	3.0	3.2	4.2	2.2	2.2	3.4	5.0	5.0	6.3	6.0	6.0	6.8	5.7	6.7	6.4	5.2	3.7	3.6	2.8	2.8	2.5	2.8	4.2
13	3.0	3.1	3.1	3.2	3.4	3.0	2.9	3.6	5.5	5.0	5.7	5.7	6.2	5.7	7.4	5.1	6.2	5.4	3.3	2.9	3.3	2.7	3.0	2.3	4.2
14	2.8	2.7	3.0	3.3	3.7	2.2	1.9	3.3	5.2	5.9	5.6	p6.0c	6.7	p6.7c	p6.6	...c	6.2	5.2	2.9	2.2	2.5	3.0	2.7	2.5	...
15	2.4	2.9	3.1	3.4	3.8	2.6	2.6	3.7	5.0	6.0	5.5	5.5	6.2	5.4	6.1	6.5	5.3	4.6	3.6	3.3	3.4	2.9	3.0	3.3	4.2
16	3.4	3.5	3.1	3.1	2.1	2.0	2.0	3.4	5.7	5.1	6.0	6.0	7.2	7.0	6.1	5.3	6.2	4.9	4.8	3.0	3.4	p2.9	3.3	3.3	4.3
17	...f	3.2	3.5	3.6	p3.3	p3.2	p2.9	3.5	...c	4.5	5.7	6.5	6.6	5.8	5.9	5.5	6.0	p5.0	4.1	p2.5	p2.2	p2.5	p2.5	p2.8	...
18	2.7	2.8	p2.8	p3.3	2.8	...c	...c	p2.9	4.8	5.2	5.7	5.3	6.1	7.1	6.3	6.6	6.1	5.4	4.2	p2.5	...a	3.0	...c	...c	...
19	p3.6	4.0	p3.5	...c	...c	...c	...c	...c	...c	...c	5.3	5.7	5.4	6.0	6.0	5.6	4.8	5.6	3.6	2.0	2.1	2.3	2.7	2.7	...
20	2.7	3.8	...f	3.3	3.1	2.5	2.2	3.0	4.8	5.1	5.3	5.9	6.8	6.0	5.9	6.1	6.6	5.1	3.1	2.8	2.6	...f	2.5	3.4	...
21	3.8	3.9	...f	...f	...f	2.3	...f	3.4	5.2	5.6	5.2	5.2	5.3	6.6	5.1	5.3	5.4	5.7	5.4	2.9	2.7	2.5	2.6	2.6	...
22	2.9	2.8	2.9	3.0	3.2	2.3	2.0	3.7	4.4	5.0	5.2	5.6	6.4	...a	5.8	5.4	6.1	5.3	3.6	2.9	2.7	2.3	2.7	2.9	...
23	3.2	2.9	2.9	2.9	2.7	2.4	2.1	3.6	5.1	...c	5.3	5.4	5.1	...c	...c	...c	...c	6.3	3.6	2.5	2.3	2.5	2.5	2.8	...
24	2.9	2.8	2.8	3.3	3.2	2.7	2.5	3.3	4.2	5.0	5.3	5.0	5.8	5.9	5.5	6.0	5.7	5.5	3.2	2.7	2.6	2.6	2.9	2.6	3.9
25	2.5	2.8	3.1	3.6	3.6	...c	...c	...c	...c	5.1	5.4	5.5	5.7	6.0	5.9	5.1	5.8	5.4	3.4	2.3	2.3	2.4	2.5	2.7	...
26	3.0	3.0	3.3	3.3	3.3	3.0	2.6	3.6	4.8	4.9	4.7	5.0	4.8	5.4	5.4	5.1	5.1	5.3	3.6	2.3	2.0	2.3	2.5	2.8	3.8
27	2.9	3.0	3.0	3.4	2.7	2.7	2.6	3.5	p4.5	5.5	5.3	6.0	6.6	6.4	6.3	5.9	5.7	...c	...c	...c	2.6	3.4	3.4	3.2	...
28	3.4	3.6	3.8	3.8	3.9	3.8	2.8	3.6	5.0	5.4	5.7	5.8	5.8	6.0	5.8	5.3	5.0	5.2	4.5	2.9	2.9	3.2	3.3	3.2	4.3
29	3.1	3.5	p3.5	3.5	3.5	3.2	3.0	4.0	5.0	5.2	5.4	5.5	5.6	5.8	5.6	5.1	5.1	5.0	4.2	2.7	2.6	2.7	3.1	3.1	4.1
30	3.0	3.4	3.8	4.0	3.9	3.6	3.5	4.2	5.0	4.8	5.4	6.0	5.3	6.5	5.9	5.4	5.8	5.1	4.3	3.5	2.8	2.8	3.3	3.4	4.4
31	3.7	4.0	3.9	4.0	3.4	3.0	2.5	3.6	5.4	5.5	5.3	6.0	...c	...c	5.6	5.5	5.3	5.0	4.2	3.3	3.4	3.5	3.6	3.6	...
MEAN*	3.1	3.3	3.3	3.4	3.4	2.8	2.5	3.5	4.9	5.3	5.5	5.6	5.9	6.1	5.9	5.7	5.7	5.3	3.8	2.7	2.7	2.8	3.0	3.0	4.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 248

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1943 JULY 1943

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	220	220	220	240	215	200	240	230	245	220	260	250	285	250	270	250	235	205	230	195	225	240	205	260	234
2	235	250	225	220	220	215	210	210	235	230	220	230	265	370	240	270	240	210	...a	220	225	225	230	250	...
3	250	225	220	235	225	225	200	220	220	255	260	270	295	340	275	260	265	230	205	210	220	235	265	280	245
4	240	210	225	215	200	185	235	230	230	240	250	300	290	270	245	250	215	210	215	220	240	p230	220	220	233
5	240	255	270	235	p250	...c	...c	...c	...c	...c	...c	280	295	265	250	255	240	240	...a	...a	...a	240	210	250	...
6	275	240	250	...a	215	240	220	225	240	250	260	265	340	270	260	200	245	225	200	270	260	270	250	260	...
7	275	240	230	250	255	240	275	...c	...c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...	...	...c	245	275	320	270	280	300	260	245	230	210	245	200	215	270	265	...
9	250	250	245	240	225	180	180	220	250	285	...c	...	...	...	...	...	...	...	...	...c	210	265	260	245	...
10	250	255	p250	240	210	200	180	235	225	250	290	280	290	290	280	265	230	215	...a	225	230	250	250	250	...
11	240	225	260	240	230	230	200	220	230	260	245	...c	...c	...c	p285	...c	...c	225	p220	...a	...a	...a	260	250	...
12	215	...a	260	...a	215	190	240	220	225	225	250	230	250	250	260	250	235	...a	225	220	230	230	...a	205	...
13	260	250	235	230	210	190	230	240	230	220	250	270	305	300	270	220	260	...a	220	240	205	...a	220	250	...
14	250	250	250	250	210	190	275	230	240	240	250	270	270	240	...c	...c	230	210	195	295	230	225	200	210	...
15	260	245	250	220	220	210	240	...c	210	265	250	235	260	280	290	240	230	230	230	230	240	265	250	255	...
16	225	230	230	215	...a	265	...a	...a	235	235	275	275	260	250	260	220	220	230	220	230	250	...c	250	...c	...
17	...a	...a	235	215	p240	...c	...a	240	...c	210	290	290	...c	...c	290	265	240	210	220	225	270	240	240	240	...
18	250	235	230	220	225	...c	...c	220	230	280	260	340	285	270	270	300	240	225	...a	...a	...a	270	...c	...c	...
19	p255	...a	...a	...c	...c	...c	...c	...c	...c	...c	300	265	250	265	250	245	...a	220	...a	...a	...a	...a	240	225	...
20	280	...a	...a	230	220	215	210	240	235	235	295	275	250	260	280	270	260	205	200	200	200	230	240	250	...
21	230	230	...a	260	200	...a	...a	225	220	245	250	280	270	250	310	280	235	220	190	200	225	230	220	230	...
22	230	280	260	230	215	200	250	220	225	...c	255	285	280	...a	260	230	255	220	225	220	215	...a	300	250	...
23	225	260	260	250	...a	220	250	230	220	...c	250	270	270	...c	...c	...c	...c	220	205	...a	...a	250	225	275	...
24	255	260	280	270	230	200	200	210	220	240	270	305	300	300	290	265	250	225	190	230	220	220	210	210	244
25	235	230	260	220	210	...c	...c	...c	...c	240	340	270	300	285	260	310	240	210	190	220	210	...a	235	220	...
26	240	210	240	230	220	200	200	200	230	255	310	280	310	275	250	270	260	225	220	220	200	230	225	220	238
27	260	255	250	200	235	205	215	220	p220	240	310	310	280	260	260	240	240	...c	...c	...c	230	230	220	220	...
28	245	230	220	210	215	220	235	230	225	220	280	270	250	300	265	260	225	220	205	220	240	235	260	250	239
29	290	...a	p220	...a	215	240	...a	220	225	240	250	310	290	280	270	230	275	225	...a	...a	...a	250	250	240	...
30	230	205	245	220	210	220	235	230	235	300	275	250	290	270	250	300	...a	220	210	200	220	250	245	250	...
31	255	240	270	235	220	235	215	235	230	260	280	275	...c	...c	265	250	240	230	205	235	220	240	260	240	...
MEAN*	247	239	244	232	221	213	224	225	229	246	270	277	281	278	269	256	242	221	210	226	226	240	240	242	242

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 249

JULY 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	3.1	...	4.0	4.0	4.2	4.0	3.9	...	...	...	...
2	...	...	...	...	...	4.0	4.2	4.3	4.0	3.7	...	...	...
3	...	...	...	...	4.0	4.0	4.1	4.0	4.0	3.7	...	...	...
4	...	...	...	3.4	3.6	4.1	4.1	...a	3.7	3.8	...	...	...
5	...	...	...	...	...	4.1	4.0	4.0	3.8	3.5	2.9	...	...
6	...	...	...	3.5	4.0	4.0	3.9	3.6	4.0	...	...	...	...
7	...	...	...	...c	...c	...c	...c	...c	...c	3.8	...	...	...
8	...	...	...	3.6	3.9	4.1	4.0	4.0	4.0	3.6	...	...	...
9	...	...	...	4.0	...c	...c	...c	...c	...c	...c	...	...	...
10	...	...	...	...	3.9	4.1	...a	3.9	4.0	3.7	...	...	...
11	...	...	...	...	4.1	...c	...c	...c	p4.1	...	...	...	...
12	...	...	...	...	4.1	...a	4.1	4.1	4.0	3.5	...	...	...
13	...	...	...	...	3.6	4.0	4.1	4.0	4.0	...	...	...	...
14	...	...	...	...	4.0	4.0	4.2	4.1	...c	...c	...	...	...
15	...	...	...	3.9	4.0	4.2	4.1	4.1	4.0	3.8	...	...	...
16	...	...	...	...	4.1	4.1	4.2	4.0	4.0	...	...	...	...
17	...	...	...	...	4.0	4.0	...c	...c	4.1	3.8	...	...	...
18	...	...	...	3.7	4.0	4.2	4.0	4.0	4.0	3.8	...	...	...
19	...	...	...	...c	3.9	4.0	4.1	4.0	4.0	3.5	...	...	...
20	...	...	...	...	4.0	4.2	4.2	4.1	3.8	...	...	...	...
21	...	...	...	3.6	3.9	4.0	4.1	4.0	4.3	3.8	...	...	...
22	...	...	...	...c	3.8	...a	4.0	...a	...a	...	...	...	...
23	...	...	...	...c	3.8	4.1	...a	...c	...c	...c	...	...	...
24	...	...	...	...	4.0	4.0	4.1	4.2	4.0	3.7	...	...	...
25	...	...	...	3.6	4.1	4.1	4.1	4.1	4.0	4.0	...	...	...
26	...	...	...	...	4.1	4.1	3.8	4.0	...	3.7	...	...	...
27	...	...	...	...	4.2	4.1	4.2	4.2	4.0	3.9	...	...	...
28	...	...	...	...	4.0	4.2	4.1	4.2	4.0	3.9	...	...	...
29	...	...	...	...	3.9	4.1	4.2	4.0	4.0	...	...	...	...
30	...	...	...	4.1	4.0	4.2	4.2	4.2	4.1	...a	...	...	...
3	...	...	...	3.7	4.0	4.0	...c	...c	4.1	3.7	...	...	...
MEAN*	...	...	3.1	3.7	4.0	4.1	4.1	4.0	4.0	3.7	2.9	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	230	...h	190	...h	...h	...	...	...	...
2	...	...	...	...	...	210	200	190	...a	220	...	...	...
3	...	...	...	...	225	200	175	...h	200	200	...	...	...
4	...	...	...	...h	220	210	210	...a	220	240	...	...	...
5	...	...	...	...	...	210	...a	...h	220	185	185	...	...
6	...	...	...	230	230	200	180	180	220	...	...	...	...
7	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
8	...	...	...	200	195	190	...h	200	210	215	...	...	...
9	...	...	...	250	...c	...c	...c	...c	...c	...c	...	...	...
10	...	...	...	...	...a	230	...a	200	220	220	...	...	...
11	...	...	...	...	200	...c	...c	...c	p220	...	...	...	...
12	...	...	...	...	255	...a	...a	...h	225	220	...	...	...
13	...	...	...	...	220	210	200	200	180	...	...	...	...
14	...	...	...	...	220	210	...a	215	...c	...c	...	...	...
15	...	...	...	230	220	190	210	195	190	240	...	...	...
16	...	...	...	...	210	220	230	210	200	...	...	...	...
17	...	...	...	...	225	220	...c	...c	...a	...a	...	...	...
18	...	...	...	240	...a	200	...b	...b	...b	235	...	...	...
19	...	...	...	...c	230	...b	220	180	200	200	...	...	...
20	...	...	...	...	210	230	200	200	180	...	...	...	...
21	...	...	...	210	220	205	200	...h	235	210	...	...	...
22	...	...	...	...c	...a	...a	...a	...a	...a	...	...	...	...
23	...	...	...	...c	215	200	...a	...c	...c	...c	...	...	...
24	...	...	...	...	215	195	200	200	190	200	...	...	...
25	...	...	...	...h	210	...a	200	220	200	210	...	...	...
26	...	...	...	...	220	200	180	170	...	200	...	...	...
27	...	...	...	...	220	220	210	210	210	220	...	...	...
28	...	...	...	...	215	215	200	180	230	210	...	...	...
29	...	...	...	...	210	200	220	...a	...a	...	...	...	...
30	...	...	...	220	...a	...a	200	...a	195	...a	...	...	...
3	...	...	...	220	220	...a	...c	...c	190	210	...	...	...
MEAN*	...	...	...	225	219	208	201	197	207	214	185	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 250

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1943 JULY 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.8	0.7	0.8	0.9	...c	...c	...c	...c	...c	...e	...
2	...	...	0.9	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	...e	...
3	...	...	0.5	0.6	0.7	0.7	0.7	0.7	0.9	0.7	0.7	0.6	...
4	...	...	0.5	0.5	0.6	0.7	0.6	0.8	0.8	0.8	0.6	...e	...
5	...	...	...c	...c	...c	0.7	0.7	0.8	0.7	0.7	0.5	...e	...
6	...	...	...e	...e	...e	0.5	0.5	0.5	0.5	0.8	0.6	...e	...
7	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
8	...	...	...c	0.8	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.5	...
9	...	...	...e	0.8	0.7	...c	...c	...c	...c	...c	...c	...c	...
10	...	...	...e	0.6	0.7	0.6	0.9	0.9	1.0	0.8	0.7	0.7	...
11	...	...	0.7	0.8	0.7	...c	...c	0.7	p0.7	...c	...c	...e	...
12	...	...	0.7	0.7	0.8	0.7	0.6	0.9	0.8	0.8	0.7	0.6	...
13	...	...	...e	0.5	0.6	0.6	0.9	0.8	0.8	0.8	0.7	0.6	...
14	...	...	0.6	1.0	0.6	1.0	1.0	1.0	0.9	0.8	0.8	0.8	...
15	...	...	...c	0.7	0.8	0.9	0.8	0.9	0.8	0.8	0.7	...e	...
16	...	...	0.9	0.8	0.8	0.9	0.8	0.9	0.9	0.8	0.8	0.8	...
17	...	...	...e	0.8	0.9	0.9	1.0	1.0	0.9	0.9	0.9	...c	...
18	...	...	0.9	1.0	1.7	1.7	...c	1.9	1.7	1.8	1.2	...c	...
19	...	...	...c	...c	1.7	1.7	1.1	1.1	1.0	1.0	0.8	0.8	...
20	...	...	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	0.8	0.8	...
21	...	...	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.5	...e	...
22	...	...	0.5	...c	0.8	0.8	0.7	0.9	0.8	0.8	0.8	0.8	...
23	...	...	0.9	...c	0.8	0.9	0.9	...c	...c	...c	...c	...e	...
24	...	...	0.8	0.8	0.7	0.7	0.8	0.8	0.9	0.8	0.8	...e	...
25	...	...	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.9	...e	...
26	...	...	0.8	0.7	0.8	0.8	0.7	0.9	0.9	0.7	0.6	...e	...
27	...	...	...e	0.7	0.8	0.8	0.7	0.8	0.8	0.9	0.7	...c	...
28	...	...	0.7	0.7	0.9	0.8	0.8	0.8	p0.8	0.8	0.7	...e	...
29	...	...	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.0	0.8	...e	...
30	...	...	0.9	0.7	1.0	1.1	0.9	1.1	1.0	1.1	1.1	...e	...
31	...	...	0.7	0.8	1.0	1.0	...c	...c	0.7	1.0	0.7	...e	...
* MEAN	...	...	0.7	0.8	0.9	0.9	0.8	0.9	0.9	0.9	0.8	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	2.0	2.5	2.8	2.9	2.9	2.9	2.8	2.6	2.1	...a	...
2	...	1.6	2.4	2.4	2.7	2.9	3.1	2.9	...a	2.5	2.3	1.7	...
3	...	...	2.1	2.5	2.7	2.8	2.8	2.9	2.8	2.8	2.8	1.9	...
4	...	1.3	2.0	2.4	2.7	2.8	2.8	2.8	3.0	...a	2.2	1.5	...
5	...	...	...c	...c	...c	2.7	2.8	2.8	2.7	2.3	2.2	...a	...
6	...	1.2	1.9	2.4	2.5	2.6	2.8	2.7	2.7	2.6	2.2	...a	...
7	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
8	...	...c	...c	2.5	2.6	2.7	2.8	2.9	2.8	2.7	2.2	2.0	...
9	...	1.6	1.9	2.7	...c	...c	...c	...c	...c	...c	...c	...c	...
10	...	1.6	2.0	2.6	2.7	3.0	3.1	3.0	2.8	2.7	2.2	1.7	...
11	...	1.5	1.9	2.4	...c	...c	...c	3.0	p3.1	...c	...c	1.6	...
12	...	...	2.1	2.6	2.9	3.0	p3.0	2.7	2.5	2.6	2.5	2.4	...
13	...	1.3	2.2	2.6	2.8	2.9	2.8	2.9	2.8	2.6	...a	...a	...
14	...	1.5	2.0	2.5	2.7	2.9	2.9	2.8	p2.5	2.7	...c	1.7	...
15	...	1.6	...c	2.8	2.8	2.7	2.9	3.0	3.0	2.7	2.3	2.0	...
16	...	...a	2.0	2.4	2.7	2.7	2.7	2.8	2.8	2.8	2.5	1.7	...
17	...	1.5	...c	2.4	2.7	2.8	2.9	...a	...a	...a	...a	p1.9	...
18	...	...c	...c	2.7	2.7	2.6	...b	2.9	2.8	2.8	2.2	...a	...
19	...	...c	...c	...c	2.7	2.7	2.8	2.8	2.8	2.6	...a	...a	...
20	...	1.5	2.1	2.5	2.7	2.8	2.9	2.9	2.8	...a	2.4	1.5	...
21	...	1.5	2.2	2.4	2.6	2.6	2.9	2.8	2.3	2.3	2.1	1.6	...
22	...	1.4	2.0	2.4	2.7	2.8	2.9	2.8	2.4	2.4	2.3	2.1	...
23	...	1.3	1.9	...c	2.4	2.4	...a	...c	...c	...c	...c	1.7	...
24	...	...a	2.0	2.4	2.6	2.8	3.0	3.0	2.8	2.7	2.4	1.7	...
25	...	...c	...c	2.5	2.8	2.6	3.1	3.0	2.8	2.6	2.4	1.7	...
26	...	1.2	2.0	2.5	2.7	2.8	2.9	3.0	2.8	2.7	2.4	1.8	...
27	...	1.5	p2.1	2.7	2.8	3.0	3.0	3.0	2.8	2.6	2.3	...c	...
28	...	1.5	2.4	2.6	2.8	3.0	3.1	2.7	p2.7	2.8	2.4	1.6	...
29	...	...a	2.2	2.5	2.8	3.0	3.0	2.8	...a	...a	...a	...a	...
30	...	1.6	2.0	2.6	3.0	3.1	3.1	2.9	2.9	...a	...a	...a	...
31	...	1.5	2.1	2.5	2.7	2.9	...c	...c	3.0	...a	2.8	1.9	...
* MEAN	...	1.5	2.1	2.4	2.7	2.8	2.9	2.9	2.8	2.6	2.3	1.8	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 251

AUGUST 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1943

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.0	3.6	4.0	p4.0	...c	...c	...c	...c	...c	...c	5.6	5.1	5.0	4.2	5.3	5.0	5.2	5.4	4.8	3.6	2.7	p3.1	2.8	2.7	...
2	3.0	3.0	3.0	3.2	3.0	2.9	2.3	3.9	4.7	5.8	5.3	6.6	5.7	6.1	5.7	5.4	6.0	5.6	4.6	3.0	2.8	3.2	3.1	3.2	4.2
3	3.3	3.5	3.5	3.2	3.0	2.1	2.0	3.7	5.0	5.5	...c	...c	6.8	7.0	6.2	5.3	5.8	5.3	4.2	3.8	3.8	3.6	3.7	3.5	...
4	3.2	3.6	...c	...c	...c	...c	...c	...c	...c	4.7	5.8	5.3	6.7	6.4	6.9	7.0	5.3	5.3	5.0	2.5	2.4	3.0	3.1	3.2	...
5	3.0	3.1	3.4	3.2	2.6	2.5	2.4	3.7	5.1	5.7	5.9	6.1	7.8	8.0	5.8	6.4	5.3	5.6	4.5	2.3	2.6	3.6	3.5	3.6	4.4
6	3.4	2.9	2.6	3.0	2.9	2.5	2.2	4.0	5.3	5.9	5.8	6.4	5.9	6.2	6.2	5.6	5.4	5.4	4.2	2.7	2.6	3.0	3.5	3.2	4.2
7	3.3	3.0	3.2	2.9	2.3	2.2	p2.0	3.4	4.2	4.5	5.0	5.5	6.5	...a	6.0	5.2	6.1	5.7	3.7	2.9	2.6	2.7	2.8	2.8	...
8	2.8	2.5	2.7	2.7	2.4	2.2	p2.2c	...c	...c	...c	...c	...c	p6.2	6.6	6.2	6.1	5.1	5.0	4.3	4.0	3.7	3.6	4.1	3.6	...
9	3.5	2.4	2.5	2.5	2.0	2.0	1.9	3.7	5.0	5.6	6.3	6.5	7.2	7.6	7.3	6.5	5.3	5.3	5.0	3.8	3.5	3.2	2.7	2.1	4.3
10	2.3	1.7	1.6	...a	...a	1.4	1.3	3.6	4.7	5.3	5.2	5.9	5.5	p5.5	5.8	5.5	5.2	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	p2.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.0	5.6	5.4	5.2	p3.7	3.3	2.9	2.7	2.5	2.8	...
12	2.5	2.6	3.0	3.2	3.1	2.9	2.7	3.7	5.1	5.6	5.1	5.6	5.6	6.3	5.7	5.0	5.2	5.0	4.6	3.9	3.1	3.4	2.9	2.8	4.1
13	2.8	3.0	3.3	3.5	3.2	3.0	2.7	3.9	5.2	6.2	6.5	6.5	6.4	6.4	6.9	7.5	6.6	4.9	4.0	2.6	3.3	3.0	...c	...c	...
14	...c	3.3	3.3	2.6	2.6	2.0	1.7	2.9	3.6	...c	...c	3.9	4.5	5.2	5.8	5.5	5.3	4.8	3.7	2.8	2.6	2.7	3.6	3.0	...
15	2.8	2.7	3.1	2.9	3.0	2.6	2.0	3.6	4.4	4.7	5.3	5.8	5.2	7.0	6.4	6.0	5.5	5.0	5.1	3.9	2.4	2.6	2.8	3.1	4.1
16	3.1	3.7	3.0	3.2	3.3	3.0	2.9	4.1	5.0	5.4	5.6	6.3	6.7	7.3	6.8	6.7	...c	...c	4.6	3.0	3.3	2.7	...c	...c	...
17	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.3	5.9	6.6	6.4	6.7	7.8	6.9	6.6	6.3	4.0	3.0	3.2	3.2	3.2	3.1	...
18	3.0	3.1	2.9	3.1	2.4	2.4	2.1	4.2	5.3	5.6	5.5	p6.5	6.5	6.9	7.3	7.1	6.7	5.2	4.7	4.4	4.0	3.6	4.0	2.9	4.6
19	3.0	2.3	2.5	2.6	2.6	2.6	p2.3	...c	...c	5.5	5.2	...c	...c	7.4	6.7	6.0	5.6	5.9	5.5	3.7	3.4	3.3	3.1	2.5	...
20	2.5	2.7	2.9	2.8	2.7	2.3	2.1	3.9	5.0	5.5	6.0	6.4	6.3	6.1	6.5	6.4	6.3	5.9	5.5	4.8	3.7	3.5	2.8	2.4	4.4
21	2.4	...f	...f	...a	3.1	3.0	2.6	3.7	4.7	5.6	5.6	6.0	6.5	6.6	5.9	6.3	6.1	5.6	4.1	3.7	2.8	2.1	2.5	2.4	...
22	2.7	...f	2.8	2.5	2.2	2.0	2.0	4.0	5.2	...c	6.1	5.7	6.6	6.5	6.1	6.5	6.0	5.5	4.5	3.3	2.6	2.7	2.4	2.5	...
23	2.7	2.7	2.8	3.2	2.6	2.7	2.4	4.3	5.4	5.7	5.9	6.0	6.1	6.8	6.3	5.7	6.1	...c	4.4	3.6	3.0	3.0	3.1	3.3	...
24	3.4	3.6	3.8	3.6	3.5	3.1	2.9	4.2	5.4	6.0	6.0	5.9	7.4	6.5	p5.6	6.4	6.3	6.2	5.3	3.1	3.4	3.6	3.3	3.0	4.6
25	3.4	3.7	3.5	3.4	3.4	2.7	2.4	4.3	4.7	5.7	6.0	6.1	6.6	7.1	6.5	6.3	6.0	5.3	4.2	3.2	2.7	2.9	2.9	2.4	4.4
26	...f	...f	2.4	2.8	2.8	2.5	2.1	3.9	4.7	5.2	5.7	5.6	6.5	6.0	5.5	5.3	6.2	5.5	5.5	3.6	3.1	3.0	3.1	3.1	...
27	3.5	3.3	3.4	3.2	3.5	2.5	2.6	4.4	5.6	5.5	5.8	6.0	6.6	6.3	6.5	...a	5.1	5.5	5.0	4.6	2.2	2.6	3.0	2.9	...
28	2.8	3.1	3.1	3.3	3.1	2.9	2.6	4.3	5.0	5.4	p5.5	5.7	5.9	6.3	6.3	7.2	6.0	5.1	4.7	4.1	3.8	3.6	3.3	3.6	4.4
29	3.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.1	6.2	5.9	5.9	5.8	5.7	4.9	3.0	2.7	2.9	3.0	3.3	...
30	3.0	3.0	2.9	2.4	2.3	2.6	2.6	4.2	5.5	6.1	6.3	6.8	6.1	7.0	8.2	7.5	5.5	5.0	4.4	4.7	4.2	4.2	4.2	4.2	4.7
31	3.2	2.7	2.6	2.8	2.5	2.1	2.2	3.4	3.9	4.7	5.1	5.9	6.0	7.4	6.0	5.6	4.7	4.1	3.7	3.1	3.3	4.1	3.3	2.3	4.0
MEAN*	3.0	3.0	3.0	3.0	2.8	2.5	2.3	3.9	4.9	5.5	5.7	6.0	6.2	6.5	6.3	6.1	5.7	5.4	4.6	3.5	3.1	3.2	3.2	3.0	4.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 252

AUGUST 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1943

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	235	240	...c	...c	...c	...c	...c	...c	...c	260	290	250	280	280	300	200	230	210	...c	240	p220	250	260	...
2	250	230	...a	235	250	225	...a	220	230	260	310	270	270	295	270	300	260	235	200	200	230	230	250	270	...
3	240	...a	...a	240	220	235	270	240	240	285	...c	...c	275	250	280	250	290	225	215	230	215	220	220	240	...
4	230	p235c	...c	...c	...c	...c	...c	...c	...c	...c	280	330	260	280	265	240	230	250	210	...a	...a	250	270	260	...
5	250	270	230	230	215	200	220	230	230	260	285	300	285	235	290	250	205	225	200	...a	...a	250	250	270	...
6	235	210	240	230	200	...a	265	235	250	285	285	245	300	295	290	245	240	235	200	240	240	250	...a	240	...
7	...a	250	250	...a	225	245	p260	245	230	255	300	300	250	...a	275	310	290	230	205	220	...a	...a	250	...a	...
8	...a	265	260	270	220	260	p270	...c	...c	...c	...c	...c	p280	300	280	260	250	225	245	...a	270	295	255	260	...
9	240	250	265	260	300	270	...a	245	235	285	...a	315	320	300	290	260	225	240	215	230	230	245	235	245	...
10	250	250	260	...a	...a	285	200	230	215	295	310	290	290	p300	285	280	250	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	270	245	190	245	p240	250	235	200	255	220	...
12	220	255	245	225	240	220	220	225	240	260	265	270	285	275	245	250	185	230	220	215	230	215	205	200	235
13	220	250	245	200	220	200	240	230	250	270	270	270	305	250	275	295	220	220	220	280	280	280	...c	...c	...
14	...c	250	...a	220	255	...a	...a	270	250	...c	...c	...c	430	330	300	300	225	235	205	235	260	250	250	275	...
15	250	270	260	280	255	225	265	230	255	340	285	280	430	270	275	290	220	240	205	205	230	230	250	255	262
16	245	220	225	250	255	250	200	230	220	250	280	290	265	275	260	230	...c	...c	190	...a	235	...a	...c	...c	...
17	...c	...c	...c	...c	...c	...c	...c	...c	...c	265	275	290	265	300	270	270	255	230	190	...a	265	240	270	260	...
18	250	250	235	200	205	180	240	230	220	260	300	p270	280	275	265	275	230	225	220	225	225	265	225	260	242
19	220	265	270	245	240	235	p210	...c	...c	245	290	285	...c	280	250	270	250	240	200	...a	240	...a	240	260	...
20	275	250	240	230	230	...a	280	250	205	225	310	310	280	310	290	...a	220	220	225	220	215	240	230	...f	...
21	...f	...f	...f	...a	300	250	260	240	225	280	310	290	270	280	320	290	250	240	220	210	220	...a	280	300	...
22	...f	...f	210	230	230	255	260	230	240	...c	260	285	280	250	305	270	235	220	205	220	205	250	250	...a	...
23	...a	250	250	235	225	240	250	230	235	260	275	290	270	290	260	235	...c	...c	205	200	225	240	250	270	...
24	245	235	220	215	220	220	240	230	240	250	275	320	250	280	290	330	250	230	220	215	250	220	230	280	248
25	260	240	270	210	210	210	230	220	220	280	280	300	300	270	280	270	220	225	215	205	245	240	225	240	244
26	...f	260	280	225	220	220	200	200	210	300	290	340	280	275	300	320	265	215	205	195	240	240	245	245	...
27	245	240	230	250	220	230	230	240	230	270	390	280	250	315	265	...a	205	235	220	210	190	260	230	260	...
28	250	230	240	220	200	210	250	250	240	270	p265	265	270	280	285	260	240	220	210	215	235	260	300	260	247
29	240	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	290	280	270	290	230	240	220	225	240	290	270	250	...
30	255	220	220	230	260	260	260	210	200	260	280	270	300	365	270	260	200	230	240	250	295	290	260	250	256
31	240	250	280	280	275	260	270	230	220	360	395	390	430	415	385	390	...a	270	280	310	290	280	260	...a	...
*MEAN	243	245	246	235	236	234	243	233	230	274	293	294	293	290	282	277	233	232	215	226	240	248	248	255	252

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 253

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1943

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.1	3.9	3.0	3.3	3.9	4.0	...	...	...
2	...	...	...	3.8	4.1	4.3	4.2	4.2	4.1	3.9	...	...	...
3	...	...	...	3.8	...c	...c	4.2	4.1	3.8	3.9	3.6	...	...
4	...	...	...	...	4.1	4.2	4.2	4.2	4.1	3.8	...	...	...
5	...	...	...	3.8	4.1	4.1	4.2	4.3	4.0	3.8	...	...	...
6	...	...	...	4.0	4.1	...a	4.2	4.3	4.1	3.7	...	...	...
7	...	...	...	...	...a	4.3	...a	...a	...a	4.2	...	...	...
8	...	...	...	...	...c	...c	...a	4.2	4.2	3.9	3.3	...	...
9	...	...	...	3.8	...a	4.2	4.2	4.2	4.1	3.8	...	...	...
10	...	...	...	3.9	4.2	4.2	4.2	p4.2	4.1	3.9	...	...	...
11	...	...	...	...c	...c	...c	...c	...c	4.2	4.0	...	...	...
12	...	...	...	3.9	4.1	4.2	4.3	4.1	4.2	3.8	...	...	...
13	...	...	...	4.0	4.1	4.2	4.2	4.3h	4.2	4.0	...	...	...
14	...	...	...	...c	...c	...c	4.0	4.1	4.0	3.8	...	...	...
15	...	...	...	3.8	4.1	4.1	4.4	4.2	4.2	4.0	...	...	...
16	...	...	...	4.0	4.2	4.4	4.3	4.3	4.2	3.8	...	...	...
17	...	...	...	3.9	4.2	4.2	4.3	4.2	4.1	4.1	...	...	...
18	...	...	...	3.9	4.3	p4.3	4.3	4.3	4.2	4.0	...	...	...
19	...	...	...	3.9	4.1	4.2	...c	4.1	4.2	4.0	...	...	...
20	...	...	...	3.9	4.2	4.3	4.2	p4.2	3.8	...a	...	...	...
21	...	...	...	3.8	4.2	4.2	4.2	4.2	4.2	4.0	...	...	...
22	...	...	...	...c	4.2	4.4	4.1	4.3	4.3	4.0	...	...	...
23	...	...	...	4.0	4.2	4.3	4.3	4.3	4.2	4.0	...	...	...
24	...	...	...	4.0	4.1	4.3	4.4	4.4	4.2	3.8	...	...	...
25	...	...	...	4.0	4.2	4.3	4.2	4.2	4.2	4.0	...	...	...
26	...	...	...	4.0	4.1	4.2	4.2	4.2	4.1	4.0	...	...	...
27	...	...	...	3.9	4.1	4.2	4.2	4.2	3.9	...a	...	...	...
28	...	...	...	4.0	4.2	4.2	p4.3	4.3	4.1	3.9	...	...	...
29	...	...	...	...c	...c	...c	4.2	4.2	4.1	3.9	...	...	...
30	...	...	...	3.9	4.1	4.2	4.2	4.2	4.1	3.9	...	...	...
31	...	...	...	3.9	3.9	3.9	3.8	3.7	3.6	3.5	...	...	...
* MEAN	...	...	...	3.9	4.1	4.2	4.2	4.2	4.1	3.9	3.4	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	220	200	160	170	180	230	...	...	...
2	...	...	...	230	200	185	170	180	185	230	...	...	...
3	...	...	...	220	...c	...c	210	230	...h	220	...	...	...
4	...	...	...	...	240	200	230	215	210	200	...	...	...
5	...	...	...	220	...a	210	220	230	200	330	...	...	...
6	...	...	...	250	220	...a	...h	215	195	200	...	...	...
7	...	...	...	...	...a	270	...a	...a	...a	210	...	...	...
8	...	...	...	...c	...c	...c	...a	...a	220	210	...	...	...
9	...	...	...	220	...a	220	225	220	225	220	...	...	...
10	...	...	...	215	230	230	200	p190	215	215	...	...	...
11	...	...	...	...c	...c	...c	...c	...c	155	210	...	...	...
12	...	...	...	220	195	210	180	170	220	180	...	...	...
13	...	...	...	240	220	215	195	190	195	200	...	...	...
14	...	...	...	...c	...c	...c	...a	220	185	220	...	...	...
15	...	...	...	235	200	210	200	150	215	205	...	...	...
16	...	...	...	205	185	215	215	215	200	...a	...	...	...
17	...	...	...	210	...a	...a	225	190	175	170	...	...	...
18	...	...	...	220	190	p210	...h	220	230	220	...	...	...
19	...	...	...	215	205	200	...c	175	225	200	...	...	...
20	...	...	...	245	225	195	195	...c	215	...a	...	...	...
21	...	...	...	195	210	220	220	195	200	200	...	...	...
22	...	...	...	...c	220	200	180	200	200	230	...	...	...
23	...	...	...	230	190	210	170	210	190	190	...	...	...
24	...	...	...	240	210	195	220	195	220	200	...	...	...
25	...	...	...	190	225	200	195	220	200	230	...	...	...
26	...	...	...	215	210	200	215	215	215	220	...	...	...
27	...	...	...	225	220	215	205	210	235	...a	...	...	...
28	...	...	...	215	230	210	p220	215	200	220	...	...	...
29	...	...	...	...c	...c	...c	210	210	210	200	...	...	...
30	...	...	...	240	220	240	225	225	215	215	...	...	...
31	...	...	...	240	230	230	220	250	230	240	...	...	...
* MEAN	...	...	...	223	213	212	204	205	205	215	...	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 254

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1943 AUGUST 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	...c	0.8	0.7	0.6	0.5	0.5	0.7	0.6	0.6	...
2	...	...e	0.6	0.7	0.7	...c	0.7	0.6	0.6	0.8	0.5	...c	...
3	...	...e	0.5	0.6	...c	...c	0.6	0.6	0.8	...c	0.6	...e	...
4	...	...c	...c	...e	0.9	1.0	1.0	0.8	1.0	0.9	0.6	...e	...
5	...	0.5	0.7	0.7	0.8	0.7	0.8	0.6	1.0	0.7	0.7	...e	...
6	...	0.6	1.0	0.7	0.8	1.1	1.0	1.0	1.0	1.0	0.7	...e	...
7	...	...e	0.8	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.8	...e	...
8	...	...c	...c	...c	...c	...c	0.8	0.9	1.0	0.8	0.7	...e	...
9	...	0.6	0.7	0.6	0.7	0.7	0.8	1.0	0.7	0.7	0.6	0.9	...
10	...	...e	0.6	0.7	0.8	0.8	0.8	0.8	1.1	1.0	0.7	...c	...
11	...	...c	...c	...c	...c	...c	...c	...c	...e	...e	...e	...e	...
12	...	...e	0.7	0.8	0.7	0.7	...e	...e	...e	0.7	...e	0.5	...
13	...	...e	...e	0.7	0.7	0.7	0.7	...e	0.7	...e	...e	...e	...
14	...	...e	0.7	...c	...c	...c	0.9	0.9	0.7	0.7	0.9	0.9	...
15	...	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.9	...
16	...	...e	0.5	0.7	0.7	0.9	0.7	0.7	0.7	...c	...c	...c	...
17	...	...c	...c	...e	...e	...e	0.7	...e	...e	...e	...e	...e	...
18	...	...e	...e	...e	...e	...e	...e	...e	...e	...e	...e	...e	...
19	...	...c	...c	0.7	0.6	0.6	0.6	...e	0.6	...e	0.6	0.6	...
20	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	...e	...
21	...	...e	...e	...e	0.6	0.7	0.8	0.7	0.7	0.6	0.6	0.6	...
22	...	...e	...e	...c	...e	...e	0.6	...e	0.6	0.6	...e	...e	...
23	...	...e	0.7	0.7	0.7	0.7	...e	...e	...e	...e	...c	...c	...
24	...	...e	0.8	0.7	0.9	0.7	0.9	0.7	0.6	0.6	0.7	0.9	...
25	...	...e	0.8	0.9	0.7	0.7	0.9	0.8	0.7	0.8	0.8	...e	...
26	...	...e	...e	0.8	0.8	0.9	0.6	...e	...e	...e	...e	0.8	...
27	...	...e	...c	0.7	0.9	0.9	0.8	0.8	0.7	...e	...e	...e	...
28	...	...e	...e	...e	...e	...c	...c	0.7	0.8	...e	0.7	0.9	...
29	...	...c	...c	...c	...c	...c	...e	...e	0.8	...e	0.8	0.8	...
30	...	...e	...e	...e	...e	0.7	0.7	0.7	0.6	0.7	0.6	0.7	...
31	...	...e	...e	0.6	0.6	0.8	0.8	0.8	0.8	...e	...e	...e	...
*MEAN	...	0.5	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	...c	3.0	2.9	2.4	2.5	2.7	2.5	2.4	2.0	...
2	...	1.5	2.0	2.6	2.8	3.0	2.9	3.0	2.9	2.9	2.5	1.8	...
3	...	1.7	2.1	2.6	...c	...c	3.0	2.9	2.9	2.8	2.4	1.7	...
4	...	...c	...c	2.5	2.8	2.9	3.0	2.8	3.0	2.7	2.4	2.1	...
5	...	1.6	2.3	2.6	2.7	2.8	2.9	3.0	3.0	2.8	2.4	2.0	...
6	...	1.7	2.2	2.5	2.7	2.6	2.8	2.8	2.9	2.6	2.4	...a	...
7	...	1.7	2.3	2.6	3.0	2.9	2.9	...a	2.8	2.5	2.7	1.9	...
8	...	...c	...c	...c	...c	...c	2.9	3.0	2.9	2.7	2.4	2.2	...
9	...	1.6	...a	...a	...a	3.0	2.9	3.1	3.0	2.7	2.4	1.8	...
10	...	1.7	2.2	2.5	2.9	2.9	3.2	3.0	3.0	2.8	2.5	...c	...
11	...	...c	...c	...c	...c	...c	...c	...c	3.0	2.7	2.4	2.1	...
12	...	1.8	2.2h	2.5	2.8	2.8	2.9	3.0h	3.1	2.8	2.5	2.1	...
13	...	1.6	2.1h	3.0	2.9	3.0	3.0	3.0	2.7	2.8	2.5	1.2	...
14	...	1.7	2.0	...c	...c	...c	2.9	2.8	3.1	2.8	2.5	2.0	...
15	...	1.6	2.2	2.6	2.8	3.2	3.0	3.1	2.9	2.8	2.3	1.8h	...
16	...	1.7	2.3	2.6	2.9	3.1	...a	2.4	3.3	...c	...c	...c	...
17	...	...c	...c	2.7	2.9	2.9	...a	3.1	3.0	3.1	1.6	2.7	...
18	...	1.8	2.6	2.8	2.9	p3.2	3.3h	3.1	2.9	2.8	2.4	2.2	...
19	...	...c	...c	2.7	2.8	2.9	...c	2.9	3.3	2.7	2.3	2.0	...
20	...	1.8	2.2	2.9	2.7	2.6	3.1	2.8	2.7	2.7	2.0	2.0	...
21	...	1.7	2.1	2.6	2.9	2.9	2.8	3.0	2.7	2.8	2.5	1.9	...
22	...	1.9	2.7	...c	3.1	3.1	3.1	3.3	3.0	3.1	2.2	1.9	...
23	...	2.0	2.5	2.7	2.8	3.0	2.9	3.0	3.0	3.0	...c	...c	...
24	...	2.0	2.5	2.6	2.9	3.0	3.2	3.2	3.2	2.9	2.5	1.9	...
25	...	2.0h	2.5	2.7	2.9	3.0	3.1	3.0	2.8	2.8	2.5	1.9	...
26	...	1.6	2.2	2.6	2.9	3.0	2.9	3.1	3.1	2.7	2.3	2.0	...
27	...	1.9	2.5	2.7	3.0	3.0	3.1	3.1	3.1	2.7	2.2	1.9	...
28	...	2.0	2.7	2.6	2.8	3.1	...c	3.0	2.9	2.8	2.5	1.8	...
29	...	...c	...c	...c	...c	...c	2.9	3.0	2.9	2.6	2.6	2.0	...
30	...	1.8	2.3	2.7	3.0	3.0	3.0	2.9	3.0	2.7	2.4	2.2	...
31	...	1.6	2.4	2.5	2.8	2.7	2.7	2.8	2.5	2.7	2.4	2.4	...
*MEAN	...	1.8	2.3	2.6	2.9	2.9	2.9	3.0	2.9	2.8	2.4	2.0	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 255

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1943 SEPTEMBER 1943

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.2	2.1	...a	...a	1.8	...a	...a	4.0	...a	4.4	4.2	4.3	4.8	4.3	4.5	4.4	4.5	4.2	3.7	3.0	2.9	2.5	2.4	...f	...
2	2.5	1.5	1.5	1.5	1.4	1.3	1.9	3.6	4.0	4.0	4.0	4.5	5.2	5.5	5.0	4.8	4.7	4.3	4.4	3.6	3.0	3.0	3.0	3.0	3.4
3	3.0	2.7	2.7	2.5	2.2	1.9	2.3	...c	...c	4.0	4.6	4.7	5.4	5.8	5.6	5.8	6.4	5.7	5.0	4.7	4.2	4.4	3.4	2.8	...
4	2.9	3.1	2.8	2.0	2.2	2.1	2.2	3.9	4.6	5.6	5.3	5.5	6.2	6.4	6.1	6.0	7.7	5.8	5.5	4.3	2.9	2.8	2.7	2.7	4.2
5	2.6	2.9	...f	...f	2.6	2.5	2.5	4.0	4.4	4.6	4.9	4.8	5.4	6.0	6.2	6.0	5.3	4.3	4.4	3.4	3.0	3.0	2.7	2.8	...
6	2.8	2.8	2.6	2.5	2.5	2.4	2.5	4.0	4.6	4.6	4.8	5.7	6.0	6.1	6.2	5.3	5.3	5.0	3.7	3.4	3.2	2.9	2.9	2.9	4.0
7	2.9	3.1	3.1	2.7	2.6	2.2	2.5	4.4	4.8	5.5	5.4	5.5	6.7	7.0	6.6	5.6	5.4	5.1	3.9	3.1	2.9	3.0	3.0	3.0	4.2
8	2.9	3.0	3.1	3.1	2.8	2.5	2.6	4.8	6.0	5.4	5.3	5.6	6.6	7.1	6.6	6.5	5.9	5.3	5.3	5.0	3.8	3.9	3.8	3.5	4.6
9	3.0	3.1	3.4	3.4	3.7	3.5	3.6	4.6	4.2	4.9	5.8	6.0	7.0	7.0	6.3	5.9	6.2	5.9	5.1	4.5	3.6	3.6	3.2	3.4	4.6
10	3.5	3.0	2.9	2.8	2.7	2.7	2.4	4.0	4.5	5.0	5.2	6.1	6.6	6.6	5.9	5.9	5.8	5.5	4.8	4.3	4.5	4.2	3.3	3.5	4.4
11	3.2	2.9	3.0	3.0	3.0	3.2	3.3	4.3	5.5	6.4	6.6	5.9	7.3	8.7	7.6	6.5	6.1	5.4	5.9	4.4	3.3	3.2	3.4	3.7	4.8
12	3.5	3.7	3.7	3.3	2.9	2.8	3.3	4.5	5.1	6.0	5.9	6.9	7.4	7.3	6.7	6.4	6.1	5.7	4.8	3.9	3.2	3.0	3.0	...c	...
13	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.4	...c	...c	...c	8.4	...c	...c	...c	5.5	4.3	3.9	3.2	3.2	3.2	3.2	...
14	3.5	3.4	3.3	2.9	3.0	3.1	3.2	4.6	5.5	p5.4	6.2	6.3	6.8	7.3	7.3	6.0	6.0	5.6	4.6	4.7	4.1	3.8	3.5	3.7	4.7
15	3.5	3.3	3.2	2.6	2.7	2.8	3.0	4.3	4.6	4.9	5.0	6.2	6.7	7.6	7.2	6.2	6.1	5.3	4.5	4.8	3.4	3.2	3.1	3.2	4.5
16	3.2	3.3	3.2	3.3	2.6	2.7	3.3	4.3	5.0	5.7	6.1	6.3	6.2	6.2	6.6	5.5	6.0	5.5	4.1	3.4	3.3	3.4	3.4	3.4	4.4
17	3.3	2.9	2.8	2.5	2.2	2.2	2.7	4.2	5.0	5.2	5.8	6.8	6.9	6.8	6.5	5.8	5.5	5.0	4.5	3.6	3.4	3.5	3.7	3.8	4.3
18	3.5	3.7	3.4	3.5	3.0	2.8	3.3	5.1	5.8	5.4	5.8	5.8	6.2	6.3	6.0	6.0	5.9	5.8	5.3	4.1	3.6	3.3	3.5	3.6	4.6
19	3.7	3.7	3.7	3.3	3.3	3.2	3.9	4.8	5.2	5.6	5.6	5.7	6.4	7.2	6.7	6.5	6.0	6.5	5.2	3.8	3.8	3.7	3.6	3.7	4.8
20	3.7	3.9	3.7	3.6	3.7	...c	3.9	...c	...c	5.3	5.5	5.7	6.3	6.3	5.7	5.6	5.7	5.4	4.6	3.4	2.6	2.7	3.2	3.4	...
21	3.5	3.5	3.7	3.6	3.1	3.0	3.2	4.6	5.1	5.8	5.5	6.4	7.1	7.1	6.3	6.3	5.8	5.6	4.8	4.5	4.0	4.2	3.8	3.9	4.8
22	3.8	3.5	3.3	3.5	3.3	3.4	3.4	4.1	4.5	4.8	5.0	4.8	5.8	6.9	6.6	6.2	5.8	5.1	4.3	3.5	3.1	3.0	3.0	2.9	4.3
23	3.0	3.0	2.9	3.0	3.3	3.6	3.7	4.7	5.2	5.9	5.7	5.8	6.7	6.5	5.9	5.5	6.2	5.3	5.3	4.3	3.7	3.8	3.5	3.3	4.6
24	3.4	2.8	3.4	3.4	3.2	3.3	3.8	4.6	5.3	5.7	5.5	6.3	7.5	7.2	6.7	6.0	5.8	5.5	5.5	4.4	3.5	3.4	3.4	3.4	4.7
25	3.6	3.4	3.6	3.4	3.3	3.5	3.7	5.3	5.9	5.8	5.6	6.1	6.7	6.5	6.2	6.0	5.9	6.2	5.8	5.0	3.5	3.2	3.6	3.8	4.8
26	3.4	3.4	3.9	3.5	3.1	3.1	3.8	4.4	4.8	5.1	5.7	6.1	6.1	6.1	6.5	6.2	6.5	5.2	4.7	4.5	3.8	2.6	3.1	2.8	4.5
27	3.0	2.9	3.5	2.5	2.5	...a	3.1	3.7	4.1	4.2	4.5	4.8	5.1	4.9	4.5	4.2	4.1	4.0	3.5	3.6	3.7	3.5	3.4	3.4	...
28	3.3	2.9	2.8	2.4	2.5	2.6	3.1	3.7	3.9	4.4	4.2	4.3	5.3	5.4	5.1	4.7	4.5	4.1	4.1	3.8	3.9	3.8	2.9	3.1	3.8
29	2.2	2.5	2.3	2.4	2.4	2.3	3.7	4.1	5.0	4.9	5.1	4.9	5.5	5.1	5.0	4.5	4.5	4.3	4.5	4.5	4.8	3.0	3.0	3.3	3.9
30	2.5	2.2	2.1	1.7	1.7	1.8	3.1	3.8	4.9	5.2	...c	...c	...c	7.1	6.5	5.3	5.3	5.0	4.2	4.3	3.9	3.7	3.4	3.3	...
31																									
*MEAN	3.1	3.0	3.1	2.9	2.7	2.7	3.1	4.3	4.9	5.2	5.3	5.6	6.3	6.6	6.2	5.7	5.7	5.1	4.7	4.1	3.5	3.4	3.2	3.3	4.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 256

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1943 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — SEPTEMBER 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	295	340	...a	...a	...a	...a	...a	...a	...a	340	380	480	395	490	440	400	310	250	240	240	235	240	230	...f	...
2	...f	280	290	280	255	...a	275	240	235	...	...	450	365	325	320	300	220	240	250	240	265	265	250	270	...
3	250	270	255	245	270	270	290	250	190	510	390	425	320	290	320	330	315	240	230	230	230	235	p190	255	283
4	290	240	230	200	255	250	265	240	330	275	310	305	260	320	270	310	220	220	220	220	250	220	260	270	260
5	215	240	275	260	230	230	270	225	310	340	340	390	340	320	280	260	260	220	230	230	260	240	255	255	270
6	255	230	240	260	250	240	250	260	320	350	410	320	290	285	275	250	250	220	240	230	230	250	240	260	267
7	290	235	230	230	220	205	240	230	240	280	305	320	290	270	265	240	250	205	210	230	240	255	240	250	249
8	250	250	270	230	230	245	250	240	240	260	320	255	280	275	280	250	220	230	230	215	240	250	225	215	252
9	225	270	240	280	250	270	250	240	215	410	330	370	310	285	275	290	230	240	215	220	215	250	250	260	266
10	245	260	260	250	250	280	260	235	350	340	410	335	290	260	295	280	220	235	220	235	235	220	215	230	267
11	230	220	230	250	255	240	240	230	220	270	275	290	300	270	255	250	250	230	215	210	230	250	255	250	246
12	250	250	230	200	230	240	255	230	340	275	310	295	265	250	280	275	275	240	220	220	240	280	230	...c	...
13	...c	...c	...c	...c	...c	...c	...c	...c	...c	335	...c	...c	...c	280	...c	...c	...c	230	210	210	230	280	255	270	...
14	230	245	210	220	240	250	...a	230	230	p325	295	300	285	290	285	260	200	230	230	240	225	250	270	250	...
15	230	245	250	...a	295	270	270	235	330	355	400	320	300	280	265	270	250	215	220	220	220	240	250	260	...
16	250	220	225	235	240	240	240	230	300	290	290	285	290	295	270	295	260	235	210	230	260	260	250	250	256
17	235	250	240	210	270	260	260	240	300	320	325	285	290	300	290	290	260	235	220	220	250	250	240	235	261
18	240	215	220	215	200	240	260	240	260	290	290	300	280	290	290	285	260	210	200	220	220	250	240	240	248
19	230	220	210	210	250	215	245	235	220	300	300	325	300	300	290	300	250	240	230	220	230	230	230	250	251
20	...c	230	220	205	215	...c	260	250	...c	355	320	350	310	290	310	290	270	210	210	215	220	245	250	255	...
21	240	240	230	210	230	240	250	230	270	290	315	350	280	285	285	275	270	200	220	240	235	250	240	240	255
22	230	230	260	255	250	260	265	340	365	340	350	425	350	300	280	280	275	200	215	230	240	250	240	260	280
23	250	225	250	230	245	250	250	240	290	295	290	310	280	280	290	335	255	210	220	210	240	240	235	240	257
24	210	265	240	230	225	225	220	230	300	280	320	310	280	275	260	270	260	210	220	210	220	240	225	250	249
25	240	240	215	220	200	260	265	240	270	270	325	300	280	275	300	260	290	230	220	210	230	260	250	250	254
26	265	290	240	195	220	230	240	240	320	340	280	290	285	320	300	315	270	220	215	210	210	250	255	290	262
27	290	300	250	200	270	...a	275	250	440	550	450	440	400	390	430	220	220	250	250	260	250	...a	260	240	...
28	220	220	230	230	...e	290	270	230	480	420	...	...	410	385	380	385	330	330	260	300	300	240	260	230	...
29	225	250	230	...a	...a	270	235	210	330	370	350	430	340	380	365	370	310	240	250	260	240	240	290	260	...
30	245	270	260	300	300	375	265	235	320	355	315	320	320	300	270	290	275	225	240	250	280	270	285	...a	...
31																									
MEAN*	245	252	240	233	244	250	256	240	297	336	333	346	310	305	301	291	259	230	225	229	239	248	245	251	268

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 257

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1943 SEPTEMBER 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION													MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...a	3.8	3.9	3.9	4.0	3.9	3.8	3.5	...	...	...	...	...	...a	215	215	210	...a	...a	210	235	...	...
2	...	...	...	3.9	3.8	3.9	4.0	4.0	4.0	3.8	...	...	...	...	...	...	215	220	210	210	200	...a	220	...	...	...
3	...	...	...	3.8	4.0	4.1	4.0	4.2	4.1	4.0	3.8	...	...	...	...	...	205	210	210	200	220	215	210	240	...	...
4	...	...	3.6	3.9	4.1	4.2	4.1	4.2	4.2	3.8	...	...	...	...	...	220	230	205	195	180	195	240	210	...	...	...
5	...	...	3.6	3.9	4.0	4.0	4.1	4.1	4.0	3.9	3.6	...	...	...	...	220	220	...c	205	195	250	220	240	220	...	...
6	...	...	3.6	4.0	4.2	4.2	4.2	4.1	3.9	3.6	3.6	...	...	...	...	230	220	215	210	210	220	210	215	215	...	...
7	...	...	4.0	4.2	4.3	4.3	4.2	4.2	4.0	3.6	...	...	...	...	...	...	235	230	215	230	235	205	210	200	...	...
8	...	...	3.7	4.1	4.3	4.3	4.3	4.3	4.2	4.0	...	...	...	...	...	240	230	200	190	225	225	210	225	...	...	...
9	...	...	...	4.1	4.1	4.2	4.2	4.2	4.2	4.0	...	...	...	...	...	...	200	215	230	200	230	215	230	...	...	...
10	...	...	3.7	3.9	4.3	4.3	4.2	4.3	4.2	4.0	...	...	...	...	...	230	230	220	210	195	215	220	210	...	...	...
11	...	...	4.1	4.2	4.4	4.2	4.3	4.2	4.0	3.6	...	...	...	...	...	...	205	210	190	185	240	230	220	220	...	...
12	...	...	...	4.0	4.2	4.3	4.4	4.3	3.9	4.1	3.7	...	...	...	...	...	210	215	215	210	215	175	230	220	...	...
13	...	...	4.3	...c	...c	...c	...c	4.2	...c	...c	...	...	...	...	...	...	220	...c	...c	...c	200	...c	...c	...	...	...
14	...	...	...	p4.2	4.2	4.3	4.3	4.3	4.2	4.0	...	...	...	...	...	...	220	200	200	200	200	225	200	...	...	...
15	...	...	3.9	4.0	4.2	4.2	4.2	4.1	4.2	4.0	3.7	...	...	...	...	230	225	210	215	220	230	215	210	220	...	...
16	...	...	...	4.0	4.2	4.2	4.2	4.2	4.2	4.0	3.6	2.9	...	...	...	...	230	230	205	200	210	210	200	235	220	...
17	...	...	3.8	4.	4.1	4.2	4.2	4.2	4.2	4.0	3.7	...	...	...	...	240	210	220	220	200	210	220	210	215	...	...
18	...	...	...	4.1	4.3	4.2	4.1	4.2	4.3	4.1	3.8	...	...	...	...	...	225	215	200	180	215	205	210	230	...	...
19	...	...	...	4.2	4.2	4.2	4.3	4.2	4.2	4.0	3.7	...	...	...	...	...	230	200	200	190	180	225	225	220	...	...
20	...	...	...	4.0	4.1	4.2	4.2	4.2	4.2	4.0	3.7	...	...	...	...	...	220	200	240	215	220	195	200	220	...	...
21	...	...	...	4.1	4.2	4.3	4.2	4.2	4.2	4.0	3.7	...	...	...	...	...	230	235	225	220	225	210	215	220	...	...
22	...	3.3	3.8	4.1	4.1	4.2	4.2	4.2	4.1	4.0	3.7	...	...	...	230	220	220	210	290	...a	...a	240	225	230	...	...
23	...	...	3.8	4.0	4.2	4.2	4.3	4.2	4.2	4.1	3.7	...	...	...	...	235	210	195	190	230	195	215	200	215	...	...
24	...	...	3.8	3.8	4.3	4.3	4.2	4.3	4.3	4.1	3.8	...	...	...	...	220	180	210	210	220	220	210	215	200	...	...
25	...	...	3.8	4.1	4.2	4.2	4.3	4.3	4.2	4.0	3.7	...	...	...	...	240	220	210	210	210	205	210	240	230	...	...
26	...	...	3.9	4.1	4.2	4.3	4.2	4.2	4.1	4.0	3.7	...	...	...	...	220	240	210	210	200	180	...a	...a	225	...	...
27	...	...	3.5	3.8	3.8	4.0	4.0	4.0	4.0	4.0	...	...	...	...	...	220	210	200	240	230	210	240	...	...	...	...
28	...	...	3.6	3.8	3.9	4.0	4.1	4.0	4.0	3.6	3.7	...	...	...	...	230	210	200	220	200	210	230	...a	...a	...	...
29	...	...	3.6	4.1	4.1	4.2	4.1	4.1	4.0	3.9	3.7	...	...	...	...	215	230	230	210	210	220	205	230	230	...	...
30	...	...	3.7	4.0	4.2	4.3	4.3	4.2	4.1	3.9	3.6	...	...	...	...	220	...a	...a	...a	...a	220	...a	220	220	...	...
31																										
MEAN*	...	3.3	3.8	4.0	4.1	4.2	4.2	4.2	4.1	3.9	3.7	2.9	...	...	230	227	219	212	214	206	214	216	217	222	220	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

SEPTEMBER 1943

SEPTEMBER 1943

TABLE 258

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	...e	...e	0.8	0.8	0.7	0.8	0.6	0.7	0.8	0.8	0.7
2	...	...e	...e	...e	0.8	0.7	0.8	0.8	0.7	0.8	...e	0.7	...
3	...	...e	0.7	0.8	0.8	0.8	0.8	0.9	...e	...e	0.8	0.8	...
4	...	...e	...e	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	...e	...
5	...	0.8	...e	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.7	1.0	0.8
6	...	0.7	...e	...e	0.8	0.7	...e	...e	1.0	0.8	0.8	0.8	0.8
7	...	0.8	0.8	1.0	0.9	1.1	0.9	0.9	0.8	0.8	0.9	...e	0.8
8	...	...e	0.7	0.9	0.8	0.9	0.8	0.8	0.8	0.8	...e	0.8	...
9	...	0.7	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	...e	...e	...
10	...	...e	0.7	0.7	0.8	0.9	0.8	0.8	0.8	...e	...e	...e	...
11	...	...e	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	...e	...e	0.8
12	...	...e	0.7	0.8	0.8	0.8	0.8	0.9	0.8	...e	...e	...e	...
13	...	...c	...c	0.8	...c	...c	...c	0.8	...c	...c	...c	...e	...
14	...	...e	0.8	p0.8	0.8	0.8	0.8	0.7	0.8	0.8	...e	...e	...
15	...	...e	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	...e	...e
16	...	...e	...e	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.6
17	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	...e	0.7	...e
18	...	...e	...e	...e	...e	0.8	...e	0.8	...e	...e	0.7	...e	...
19	...	...e	...e	0.8	0.9	0.8	0.9	0.9	0.9	...e	...e	...e	...e
20	...	...e	...c	0.7	0.8	0.8	0.8	0.8	...e	0.8	...e	...e	...e
21	...	...e	...e	...e	0.8	0.8	0.7	0.8	...e	0.8	0.7	...e	...e
22	...	...e	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.8	...e	...e	...
23	...	...e	1.0	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	...e	...e
24	...	...e	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	...e	0.8
25	...	...e	0.8	...e	0.8	0.7	0.8	0.9	0.9	0.9	0.8	...e	...e
26	...	...e	...e	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...e	...
27	...	0.8	0.8	0.8	0.9	1.0	0.9	0.9	1.0	0.9	0.7	...e	...
28	...	0.7	0.8	0.9	0.8	1.0	1.0	0.9	1.0	0.8	...e	...e	0.9
29	...	...e	p0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	...e
30	...	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.9	0.8	0.7	...
31													
MEAN*	...	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...a	...a	2.5	2.6	2.7	...a	2.9	2.9	2.7	2.5	2.1	...
2	...	1.6	1.6	2.6	2.8	2.8	2.9	2.8	...a	2.5	2.8	2.4	...
3	...	2.0	2.4	2.5	2.8	2.8	2.9	2.8	2.9	2.7	2.6	1.9	...
4	...	1.9	2.4	2.6	2.8	2.9	3.0	3.1	3.1	2.8	2.5	1.9	...
5	...	1.6	2.2	2.6	...c	...c	...c	2.9	2.9	2.7h	2.5	2.0	...
6	...	1.9	2.6	2.8	3.0h	2.8	3.3	2.9	2.8	2.4	2.4	1.9	...
7	...	2.3h	2.3h	3.0h	2.9	3.3	3.4	3.4	3.0	2.9	2.6	2.0	...
8	...	2.4	2.8	3.1h	...h	3.3	3.3	3.2	3.1	2.9	2.5	2.1	...
9	...	2.1	2.5	2.8	3.0	2.9	2.9	2.9	3.1	2.9	2.6	2.2	...
10	...	1.8	2.4	2.8	3.0	3.0	2.9	3.0	3.1	2.8	2.6	2.2	...
11	...	2.0	2.5	2.8	3.0	2.9	2.9	3.0	3.0	2.9	2.7	2.0	...
12	...	2.1	2.5	2.9	3.0	3.1	3.1	3.0	3.2	3.0	2.6	1.9	...
13	...	...c	...c	2.9	...c	...c	...c	3.0	...c	...c	...c	2.1	...
14	...	2.1	2.6	p2.8	3.0	2.9	2.8	3.1	3.1	2.9	2.6	2.1	...
15	...	2.2	2.6	2.8	3.0	3.1	3.1	3.1	2.9	3.0	2.5	2.1	...
16	...	2.4h	2.8	2.8	2.9	3.1	3.1	2.9	3.2	3.0	2.8	2.0	...
17	...	2.3	2.9	2.8	3.0	3.2	3.3	3.1	3.1	3.0	2.6	2.2	...
18	...	2.5	2.9	2.8	3.1	3.2	3.1	3.4	3.2	2.9	2.5	2.0	...
19	...	2.4	3.0	2.8	3.1	3.1	3.1	3.2	3.3	2.9	2.4	2.0	...
20	...	2.2	...c	2.8	2.9	3.1	2.9	3.0	2.9	2.9	2.5	2.0	...
21	...	2.3	2.8	2.8	3.2	3.0	3.0	3.2	3.2	2.8	2.5	2.0	...
22	...	2.3	2.5	2.9	3.0	2.9	3.2	3.2	3.5	2.9	2.5	2.0	...
23	...	2.1	2.4	2.9	3.0	3.2	3.0	3.2h	3.1	2.8	2.6	2.1	...
24	...	2.5	2.8	2.9	3.1	3.2	2.9	3.3	3.2	3.0	2.6	2.1	...
25	...	2.4	2.8	2.9	3.2	3.2	3.3h	3.3	3.3	3.0	2.5	2.4	...
26	...	2.2	2.7	2.9	2.9	3.1	2.9	3.2	3.1	2.8	2.4	1.6	...
27	...	2.1	2.5	2.8	2.8	3.1	3.0	3.0	3.0	2.7	2.5	2.0	...
28	...	2.3	2.6	2.8	2.9	3.2	3.1	3.0	3.0	2.8	2.6	1.9	...
29	...	1.9	p2.5	2.9	2.9	3.0	3.0	3.0	3.1	2.9	2.5	2.1	...
30	...	2.1	2.9	2.5	...a	...a	...a	...a	2.9	2.7	2.4	1.8	...
31													
MEAN*	...	2.1	2.6	2.8	3.0	3.0	3.0	3.1	3.1	2.8	2.6	2.0	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 259

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1943 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND OCTOBER 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.9	2.2	1.7	1.7	2.0	2.1	2.8	3.7	4.3	4.9	5.6	5.8	6.4	6.2	6.6	5.2	6.1	4.8	4.6	4.0	3.7	3.5	3.3	2.7	4.0
2	2.7	2.5	2.4	2.3	1.9	2.1	3.3	4.1	5.2	5.0	5.0	5.3	5.8	5.3	5.2	5.1	5.0	5.2	5.0	4.2	3.7	3.0	2.7	2.6	4.0
3	2.6	2.5	2.4	2.2	2.4	2.2	3.2	4.1	4.4	4.9	5.0	6.1	6.8	6.5	5.5	6.0	5.8	5.3	4.7	4.8	5.2	3.1	2.7	2.3	4.2
4	2.5	2.6	2.5	2.6	2.6	2.4	3.6	4.2	4.4	...c	...c	...c	4.8	5.0	4.5	4.3	4.8	4.8	4.2	4.2	3.4	2.2	2.0	2.2	...
5	2.3	2.2	2.2	2.2	2.1	1.8	2.4	4.1	4.2	4.4	4.6	4.8	5.2	5.5	5.2	4.9	4.8	5.0	4.6	3.6	3.2	2.8	2.3	2.1	3.6
6	...f	2.3	2.1	...f	2.2	2.5	3.6	4.6	4.8	4.6	4.8	5.4	5.8	5.9	5.8	5.2	5.0	5.0	5.1	4.1	3.4	2.9	2.9	3.0	...
7	2.5	2.5	2.6	2.6	3.0	2.7	4.0	4.3	4.8	4.8	5.1	5.5	5.6	5.2	5.1	5.0	4.9	5.3	5.3	4.7	3.8	3.7	3.6	3.0	4.2
8	3.0	3.0	3.1	3.0	2.7	2.7	3.7	5.1	5.6	5.4	6.3	6.5	7.2	5.7	5.1	5.2	5.0	4.9	4.8	4.8	4.5	4.3	3.7	3.6	4.5
9	2.9	3.5	3.7	3.3	3.2	3.0	2.8	3.7	3.6	4.0	4.1	4.3	4.4	4.2	4.5	4.6	4.3	4.8	4.4	3.9	3.7	2.7	2.9	3.1	3.7
10	3.1	3.3	3.1	2.7	2.6	2.5	3.1	5.6	3.9	3.8	4.1	4.3	4.5	4.6	4.9	4.8	4.9	4.7	4.4	4.0	2.9	2.9	2.8	2.7	3.8
11	2.7	2.9	2.8	2.8	2.2	2.2	3.3	4.0	4.3	4.2	4.6	5.0	5.0	5.3	5.4	...c	4.8	5.0	4.6	3.8	3.3	3.2	p3.4	3.2	...
12	3.3	2.9	2.6	2.4	2.3	2.5	3.6	4.3	4.5	4.7	4.5	5.3	5.9	6.4	6.7	6.0	5.5	5.2	4.5	3.6	3.1	2.7	2.6	2.6	4.1
13	2.6	2.7	2.9	2.9	2.5	2.5	3.9	4.6	4.5	4.4	4.9	5.6	5.4	6.1	6.0	5.4	4.8	4.7	4.6	4.5	3.4	2.8	3.0	3.2	4.1
14	3.0	3.0	3.2	2.6	2.7	2.6	3.6	4.5	4.5	4.8	4.9	5.8	5.7	6.1	5.8	5.3	5.0	5.3	5.3	4.5	3.3	2.8	3.0	3.1	4.2
15	3.0	3.0	3.3	3.3	2.9	3.3	4.1	5.0	5.0	5.2	5.3	5.7	6.5	7.2	6.7	6.9	7.0	6.7	6.0	4.5	3.8	2.9	2.7	2.7	4.7
16	2.9	2.8	2.8	3.3	3.6	3.4	3.9	4.8	5.0	5.1	4.8	5.1	5.6	5.7	6.2	6.5	6.2	6.0	6.0	6.1	4.8	3.7	3.5	3.4	4.6
17	3.7	3.9	...f	3.9	3.8	4.1	4.9	5.2	5.2	5.3	5.5	6.0	6.4	7.2	6.8	6.8	6.5	7.3	7.0	6.0	4.4	3.8	3.5	3.6	...
18	4.0	3.6	4.0	3.4	3.0	3.0	3.9	4.5	4.5	4.8	5.0	5.2	5.9	6.7	6.5	6.2	5.9	6.2	6.2	6.2	5.3	...a	3.1	3.3	...
19	3.3	3.3	3.3	2.8	3.0	3.0	4.3	4.8	4.8	4.7	5.1	6.0	6.8	6.4	5.8	5.4	5.1	5.4	6.1	6.0	4.7	4.0	3.9	3.7	4.6
20	4.0	3.9	4.1	4.0	...f	3.4	4.1	4.6	4.8	5.1	5.3	5.8	6.7	5.8	...c	...c	...c	5.7	5.9	6.1	5.4	4.0	3.8	3.5	...
21	3.7	3.6	3.4	3.5	3.5	3.7	4.8	5.0	5.3	4.7	4.8	5.3	6.8	7.1	6.2	5.4	5.1	5.1	5.2	5.5	4.7	3.3	3.1	3.2	4.7
22	3.4	3.4	3.2	3.1	2.9	3.0	4.2	4.7	4.9	4.9	5.0	5.7	6.0	6.6	6.5	6.4	6.4	6.4	6.4	6.3	5.4	4.5	4.1	4.3	4.9
23	4.0	3.6	3.3	3.1	3.0	3.1	4.0	5.0	5.1	5.0	5.1	6.3	7.9	7.7	6.7	6.5	5.6	4.9	5.2	5.8	5.2	4.6	4.1	3.6	4.9
24	3.4	3.0	3.2	3.1	2.8	2.9	4.1	4.5	4.7	5.1	5.3	5.6	6.6	p7.7	7.4	6.5	5.9	5.6	6.0	6.6	6.4	5.1	4.3	4.2	5.0
25	3.6	3.5	2.8	2.7	2.1	2.1	3.1	3.9	4.3	4.3	5.4	6.4	p6.0	5.9	6.0	5.3	5.2	5.4	5.3	4.7	4.2	3.5	3.2	2.5	4.2
26	2.5	2.3	2.2	2.2	2.1	2.2	3.4	3.7	3.9	3.9	4.0	4.0	4.5	4.5	4.8	4.6	4.4	4.1	4.4	4.6	4.0	3.4	3.2	3.4	3.6
27	3.1	3.0	2.4	2.1	2.0	2.1	3.1	3.5	3.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	4.1	4.0	...a	4.7	4.9	4.9	4.6	4.1	4.1	3.8	4.0	3.2	2.3	2.1	2.3	...
29	...f	...f	2.0	2.2	2.3	2.3	3.1	3.8	4.0	3.1	4.1	4.1	4.6	4.7	4.9	4.7	...c	4.6	4.2	4.2	3.7	3.4	2.8	p2.5	...
30	2.5	...f	2.5	2.6	2.7	2.5	3.3	3.8	4.0	4.2	4.6	...	5.0	5.0	4.6	4.5	4.5	4.0	3.9	3.7	3.4	3.3	3.3	3.3	...
31	2.7	2.9	2.2	2.3	2.4	2.6	4.1	4.2	4.9	4.1	4.2	4.5	5.0	5.2	5.3	5.2	4.7	4.4	4.2	4.1	3.7	3.1	3.3	3.6	3.9
*MEAN	3.1	3.0	2.8	2.8	2.6	2.7	3.6	4.4	4.6	4.6	4.9	5.4	5.8	5.9	5.7	5.4	5.3	5.2	5.1	4.8	4.1	3.4	3.2	3.1	4.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 260

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1943 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — OCTOBER 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	230	230	230	290	300	285	270	250	400	360	405	300	300	315	280	300	275	240	240	...a	240	270	320	280	...
2	260	250	270	240	260	270	260	225	310	330	395	390	305	320	330	350	220	250	230	230	240	245	270	280	280
3	230	260	265	230	260	300	250	240	250	420	430	335	295	310	340	310	280	230	235	255	215	235	270	255	279
4	260	280	270	255	230	240	235	235	375	...c	...c	...c	420	365	480	540	365	280	240	235	230	180	300	305	...
5	260	280	...f	240	260	290	250	225	p430	400	515	435	420	365	365	355	365	270	220	235	250	260	260	270	...
6	310	270	240	260	250	305	210	230	270	410	400	350	325	315	300	315	300	230	230	220	220	240	...a	250	...
7	250	230	220	230	230	240	240	230	290	360	390	330	335	370	370	340	330	280	230	215	255	...a	...a	280	...
8	250	300	245	220	285	240	265	220	310	370	300	330	300	305	350	330	310	230	250	240	250	240	270	255	278
9	290	280	240	260	280	270	530	470	...	...	...	...	...	...	490	400	510	310	250	240	230	...a	...a	250	...
10	280	265	275	260	240	270	260	...	...	...	...	...	...	...	390	370	320	270	240	210	250	270	270	250	...
11	275	250	260	240	250	235	240	340	450	...	450	400	395	355	300	...c	220	260	240	220	240	270	...a	245	...
12	240	220	230	245	255	260	240	275	360	390	...	360	350	310	295	300	270	270	220	230	220	250	250	250	...
13	260	250	260	220	235	265	240	265	330	...	380	340	370	315	300	275	320	240	235	230	210	250	260	270	...
14	260	240	230	220	250	240	240	270	370	380	440	330	350	315	300	330	315	290	230	210	225	270	265	...a	...
15	270	250	240	...f	260	240	240	250	260	330	340	365	315	300	300	290	270	260	215	210	215	235	270	260	...
16	265	265	300	240	230	220	240	260	260	320	390	370	350	335	320	290	280	265	235	230	...a	...a	...a	265	...
17	...a	...a	270	220	215	225	220	260	280	300	330	315	330	300	310	320	290	280	240	200	210	230	250	...a	...
18	...a	...a	...a	230	230	250	240	270	360	...a	370	370	330	300	290	300	295	260	270	215	210	...a	...a	250	...
19	275	270	230	210	250	250	230	260	310	385	400	345	315	310	325	350	330	300	240	220	210	220	230	250	280
20	...a	...a	230	...a	...f	...a	230	280	315	345	360	365	300	360	...c	...c	...c	270	230	230	200	220	270	270	...
21	275	255	240	260	260	240	240	270	270	...	480	440	330	300	290	320	300	310	240	230	210	215	270	250	...
22	240	240	225	225	250	255	235	250	300	340	390	360	330	320	320	320	275	260	235	240	230	240	295	275	277
23	235	240	250	225	220	230	230	270	320	...	360	365	300	300	300	280	265	235	260	225	230	220	240	...a	...
24	240	...a	240	260	240	240	230	310	380	330	360	410	340	300	280	280	270	295	245	240	200	270	240	280	...
25	300	270	250	240	250	300	250	...	...	...	410	330	p360	340	310	320	315	305	250	220	240	260	250	220	...
26	250	250	265	250	275	310	250	...	...	...	...	...	...	530	440	430	385	240	275	240	240	250	290	280	...
27	...a	...a	260	275	...a	320	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...a	...	440	470	405	...	360	270	255	220	280	260	280	...
29	...f	...f	300	260	250	240	250	450	...	...	...	...	460	460	420	380	...c	325	255	250	240	250	270	p290	...
30	270	...a	320	270	250	275	245	...	...	...	...	...	430	400	...a	465	...	230	255	260	270	290	270	245	...
31	...a	250	...a	...a	270	270	240	310	...	...	...	550	...	410	405	340	340	300	250	240	260	310	275	265	...
MEAN*	261	256	254	244	251	261	252	277	327	361	395	369	346	345	345	343	308	272	242	230	230	249	267	264	289

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 261

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1943

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	3.7	4.0	4.1	4.2	4.3	4.2	4.2	4.0	3.7	...	...
2	...	...	3.7	4.0	4.0	4.1	4.1	4.1	4.1	4.0	...	...	...
3	...	...	...	4.1	4.1	4.2	4.3	4.2	4.2	4.0	3.9	...	...
4	...	...	3.9	...c	...c	...c	4.0	4.0	4.0	4.0	3.8	3.2	...
5	...	...	3.8	4.0	4.2	4.2	4.2	4.2	4.2	4.1	3.9	3.2	...
6	...	...	3.8	4.0	4.2	4.3	4.2	4.2	4.2	4.1	3.8	...	...
7	...	...	4.0	4.0	4.3	4.3	4.2	4.3	4.1	4.1	3.8	3.3	...
8	...	...	4.0	4.0	4.1	4.3	4.2	4.2	4.1	4.0	3.8	...	...
9	2.5	3.2	3.6	3.8	3.9	4.0	4.1	4.0	3.9	3.9	3.6	3.3	...
10	...	3.3	3.7	3.8	3.9	4.1	4.1	4.1	4.1	4.0	3.7	3.4	...
11	...	3.6	3.8	4.0	4.1	4.1	4.2	4.1	4.2	...c	...	3.3	...
12	...	3.5	3.9	4.1	4.2	4.1	4.2	4.2	4.1	4.1	3.7	3.3	...
13	...	3.6	3.9	4.1	4.1	4.2	4.2	4.1	4.1	4.0	3.7	...	...
14	...	3.4	3.9	4.1	4.2	4.1	4.2	4.2	4.2	4.1	3.7	3.4	...
15	...	...	3.9	4.1	4.3	4.3	...a	4.3	4.2	4.0	3.8	3.3	...
16	...	3.6	3.9	4.2	4.3	4.3	4.3	4.3	4.3	4.1	...a	3.3	...
17	...	3.6	4.0	4.2	4.2	4.4	4.4	4.2	4.3	4.1	4.0	3.5	...
18	...	3.5	3.9	...a	4.3	4.2	4.3	4.3	4.2	...a	...a	...	...
19	...	3.6	3.9	4.2	4.3	4.3	4.3	4.2	4.2	4.1	3.9	3.5	...
20	...	3.7	3.9	4.1	4.3	4.3	4.3	4.3	...c	...c	...c	3.5	...
21	...	3.6	3.9	4.2	4.2	4.4	4.4	4.2	4.2	4.1	3.9	3.4	...
22	...	...	4.0	4.2	4.3	4.3	4.5	4.3	4.3	4.2	4.0	3.5	...
23	...	3.7	4.0	4.8	4.3	4.3	4.3	4.4	4.3	4.1	3.8	...	...
24	...	3.6	4.1	4.2	4.2	4.2	4.4	4.3	4.3	4.1	3.9	3.5	...
25	...	3.5	3.8	4.1	4.2	4.2	4.3	4.2	4.2	4.0	3.9	3.6	...
26	...	3.5	3.8	3.8	4.0	4.0	4.0	4.1	4.0	3.8	3.8	...	...
27	3.0	3.4	3.9	...c	...c	...c	...c	...c	...c	...c	...c	...	...
28	...	...c	...c	4.0	3.9	...a	4.1	4.0	4.0	3.9	3.7	3.5	...
29	...	3.5	3.8	3.9	4.1	4.1	4.0	4.0	4.1	4.0	3.8	3.4	...
30	...	3.7	3.8	4.0	4.2	4.2	4.1	4.2	...a	4.0	4.4	...	...
31	...	3.6	3.9	4.0	4.1	4.1	...a	4.2	4.1	4.0	3.9	3.5	...
MEAN*	2.8	3.5	3.9	4.1	4.2	4.2	4.2	4.2	4.2	4.0	3.8	3.4	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	240	230	240	210	230	...a	...a	225	210	...	...
2	...	...	260	225	210	195	200	200	210	240	...	...	...
3	...	...	...	225	205	220	230	220	225	200	250	...	...
4	...	...	240	...c	...c	...c	250	230	200	225	245	240	...
5	...	...	230	205	200	205	195	210	230	240	240	235	...
6	...	...	225	200	205	220	205	205	205	205	210	...	...
7	...	...	225	210	210	...a	...a	200	...a	215	230	220	...
8	...	...	240	200	200	230	220	195	190	230	235	...	...
9	285	210	220	210	220	200	210	230	...a	220	230	250	...
10	...	235	210	200	200	250	200	180	170	250	245	230	...
11	...	225	220	215	200	200	...h	...a	225	...c	220	...	...
12	...	240	220	200	225	210	200	240	205	230	220	225	...
13	...	230	220	200	190	190	230	230	220	220	210	...	...
14	...	230	220	215	...a	185	195	200	220	225	220	240	...
15	...	...	230	230	230	...a	...a	200	200	200	...a	210	...
16	...	230	220	200	200	190	180	240	...a	250	...a	235	...
17	...	230	230	210	210	...a	210	210	210	215	...a	...a	...
18	...	220	...a	...a	210	...a	190	250	...a	...a	...a	...	...
19	...	230	225	220	...a	210	...a	220	230	225	230	220	...
20	...	225	225	...a	...a	...a	...a	...a	...c	...c	...c	225	...
21	...	225	225	220	210	195	195	190	230	210	220	235	...
22	...	...	220	200	200	180	175	180	200	205	250	235	...
23	...	225	...c	375	215	205	...a	...a	200	215	230	...	...
24	...	230	230	230	220	220	195	...a	...a	230	230	220	...
25	...	240	220	200	200	...a	...a	...a	220	220	235	230	...
26	...	240	225	200	225	200	190	240	240	255	230	...	...
27	265	230	215	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
28	...	...c	...c	...a	...a	...a	...a	230	...a	230	230	240	...
29	...	245	210	215	200	190	185	200	245	245	240	235	...
30	...	230	220	210	210	...a	...a	...a	...a	220	335	...	...
31	...	240	230	220	...	...	...a	225	...	230	230	235	...
MEAN*	275	230	226	218	210	205	204	214	214	225	234	231	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 262

OCTOBER 1943

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	0.7	0.9	0.9	1.1	0.9	1.0	0.8	0.7	0.7	0.8	0.8	1.7	2.3	2.6	2.8	2.9	2.9	3.0	3.0	3.0	2.8	2.5	1.7	1.5
2	0.5	0.5	0.8	0.8	0.8	0.9	0.8	0.9	0.9	0.5	0.8	0.5	0.5	...	2.2	2.6	2.8	2.9	2.9	2.9	2.9	3.0	2.9	2.5	2.1	...
3	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.5	0.5	1.7	2.3	2.6	2.9	2.9	2.9	3.0	2.9	3.0	2.9	2.7	2.0	...
4	0.5	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.5	0.8	1.7	2.2	2.6	2.8	2.9	3.0	3.0	2.8	3.0	2.9	2.5	2.3	1.7
5	0.5	0.5	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.5	0.5	0.5	...	2.3	2.8	2.9	3.0	2.9	2.9	2.9	3.1	3.0	2.5	2.2	1.6
6	0.5	0.7	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.9	0.9	0.8	0.5	...	2.3	2.7	2.9	2.8	2.9	2.9	2.9	3.1	2.9	2.6	2.4	...
7	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0	...	2.5	2.5	2.6	2.7	2.7	2.7	2.9	2.7	3.0	2.7	2.1	1.6
8	0.5	0.8	1.0	0.5	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.5	0.5	2.0	2.4	2.6	2.9	3.0	2.9	2.9	2.9	2.9	2.9	2.6	2.1	1.6
9	0.7	0.7	0.8	0.9	0.9	1.1	0.9	1.0	1.0	0.8	0.8	0.8	0.8	1.7	2.2	2.5	2.7	2.6	2.9	3.0	2.8	2.7	2.9	2.5	2.1	1.6
10	0.5	0.7	0.8	0.8	0.9	1.0	0.9	1.0	0.8	0.8	0.8	0.7	0.6	...	2.1	2.6	2.7	2.7	2.7	2.7	3.0	3.1	2.9	2.6	2.3	1.6
11	0.5	0.5	0.8	0.9	1.0	0.9	0.9	0.8	0.8	...c	0.8	0.7	0.8	1.7	2.4	2.5	2.7	2.7	2.7	2.7	2.7	2.8	...c	2.6	2.1	1.3
12	0.5	0.7	0.8	0.9	0.9	0.9	1.1	1.0	1.0	0.9	0.8	0.7	0.5	1.7	2.3	2.7	2.9	2.9	3.0	2.7	2.8	2.8	2.8	2.6	2.1	1.5
13	0.5	0.5	0.5	0.8	0.9	1.0	1.0	1.1	1.0	0.8	0.8	0.5	0.5	...	2.3	2.5	2.9	2.9	2.7	2.7	2.7	2.7	2.9	2.6	2.4	1.6
14	0.5	0.8	0.8	0.8	0.9	1.1	1.0	1.0	1.0	0.9	0.7	0.5	0.5	1.7	2.1	2.7	2.8	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.2	1.5
15	0.5	0.7	1.0	0.9	0.9	1.1	1.1	1.1	1.0	0.8	0.5	0.5	0.5	2.0	2.6	2.7	3.0	2.7	2.8	2.9	2.7	2.7	2.7	2.6	2.0	1.9
16	0.7	0.7	0.8	1.0	0.9	1.0	1.1	1.0	1.0	1.0	0.8	0.5	0.5	1.7	2.5	2.9	2.8	2.8	2.8	2.7	2.8	2.8	2.9	2.7	2.3	1.7
17	0.5	0.7	0.8	0.9	0.8	0.9	1.0	1.0	1.0	1.0	0.7	0.5	0.5	1.9	2.5	2.7	3.1	3.0	2.7	2.7	2.7	2.5	3.0	2.7	2.7	1.6
18	0.5	0.7	0.8	0.8	0.9	1.0	1.1	1.0	1.0	0.8	0.7	0.5	0.5	...	2.5	2.6	2.9	2.8	2.7	2.7	3.1	3.1	3.0	2.7	2.2	...
19	0.5	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.0	0.8	0.8	0.8	0.7	2.0	2.6	2.7	2.9	2.9	3.2	3.1	3.0	2.9	3.0	2.6	2.1	1.6
20	0.5	0.7	0.8	0.9	1.0	1.1	1.1	1.0	...c	...c	...c	0.5	0.5	1.9	2.4	2.7	2.9	3.1	3.2	3.2	3.2	...c	...c	...c	2.2	1.6
21	0.8	0.7	0.8	0.9	1.1	1.1	1.1	1.1	0.8	0.7	0.7	0.7	0.5	1.9	2.5	2.7	3.1	3.2	p3.2	3.3	3.2	3.4	3.0	2.7	2.2	1.7
22	0.5	0.7	0.9	0.9	1.1	1.0	1.1	1.1	1.0	1.0	0.8	0.7	0.5	1.9	2.5	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.0	2.4	...
23	0.6	0.7	1.0	1.0	1.1	1.1	1.1	1.0	0.9	1.0	0.8	0.6	0.9	1.7	2.4	...c	3.0	3.2	3.2	3.1	3.1	3.2	3.2	2.7	2.3	1.6
24	0.5	0.7	0.8	0.9	0.9	1.1	1.1	1.1	1.1	0.9	0.9	0.7	0.8	...	2.5	2.7	2.9	3.1	3.2	3.2	3.2	3.1	3.0	2.7	2.0	1.6
25	0.7	0.7	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.8	0.7	0.8	2.0	2.3	2.6	2.9	3.2	3.2	3.2	3.2	3.1	2.9	2.6	2.1	1.7
26	0.7	0.8	0.7	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.5	2.0	2.4	2.7	2.8	3.1	3.1	3.1	3.2	3.0	2.8	2.4	2.3	1.8
27	0.7	0.9	1.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	1.8	2.4	2.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
28	...c	...c	...c	1.1	1.0	1.1	1.1	1.0	1.0	1.0	0.7	0.5	...	...c	...c	...c	2.8	3.0	3.1	3.2	3.2	3.1	3.0	2.6	2.5	...
29	0.7	0.8	0.7	1.0	1.1	1.1	1.1	1.1	1.1	1.0	...c	0.7	0.6	1.5	2.2	2.6	3.0	3.2	3.2	3.2	3.2	3.2	3.0	2.6	2.2	1.7
30	0.7	0.7	1.0	0.8	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.9	2.4	2.7	2.9	3.2	3.2	3.2	3.2	3.2	3.0	2.6	2.2	1.7
31	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.8	2.0	2.5	2.6	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.4	1.7
* MEAN	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	1.8	2.4	2.6	2.9	3.0	3.0	3.0	3.0	3.0	2.9	2.6	2.2	1.6

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 263

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1943 | NOVEMBER 1943

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	2.0	2.1	2.2	2.0	2.2	3.4	3.8	3.7	...c	...c	...c	...a	4.6	4.8	4.8	4.8	4.4	4.5	4.1	4.2	3.8	3.8	3.7	...
2	3.2	2.6	2.1	2.0	...a	2.2	3.4	3.7	3.9	3.9	4.1	4.2	4.5	4.5	4.5	4.6	4.8	4.7	4.6	4.7	4.2	3.0	2.5	2.7	...
3	2.7	2.5	2.5	2.9	2.7	3.1	4.2	4.4	4.4	4.8	4.8	4.9	5.6	6.5	7.1	7.0	6.3	5.9	5.2	5.0	4.3	3.6	3.3	3.1	4.7
4	3.1	3.4	3.1	3.1	3.1	3.3	4.3	4.8	4.8	5.0	5.0	5.6	6.3	6.8	6.1	6.2	5.8	5.6	5.4	5.5	5.4	4.6	4.0	4.2	4.8
5	3.9	3.5	3.5	3.4	3.4	4.0	4.9	4.4	...c	5.2	6.0	5.8	6.0	5.6	6.5	6.0	5.8	5.4	5.1	5.5	4.6	3.6	3.4	3.3	...
6	3.4	3.1	3.1	2.6	2.4	2.5	3.4	3.7	3.7	4.0	4.1	4.1	4.2	4.7	4.9	5.0	4.7	4.7	4.0	3.8	3.7	3.4	3.6	3.6	3.8
7	3.6	3.0	2.5	3.2	3.2	3.2	3.8	3.6	3.8	3.9	4.2	...a	5.2	5.0	4.6	4.4	4.1	4.2	4.1	4.1	4.0	3.8	3.8	3.8	...
8	3.4	3.2	2.9	...a	2.6	2.6	3.5	3.8	4.4	4.7	5.0	5.5	...c	...c	5.5	...c	...c	...c	...c	...c	4.6	3.8	3.6	3.8	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	4.0	4.4	4.7	4.8	5.3	5.0	4.7	4.8	4.6	4.4	4.6	4.5	4.7	4.5	4.2	...
10	3.8	3.6	3.1	3.2	2.9	3.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
12	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.3	6.0	5.6	5.2	5.1	4.8	4.7	4.7	4.5	4.2	...
13	4.1	3.9	3.0	2.7	2.5	2.6	3.8	4.7	5.3	5.4	5.0	5.2	5.6	...c	...c	...c	...c	5.8	5.5	5.6	5.4	4.8	4.4	4.3	...
14	4.0	3.8	3.3	3.1	2.8	3.0	4.2	4.3	5.2	5.3	...c	...c	...c	p6.1	p6.0	6.6	6.3	6.2	5.9	5.5	5.0	3.9	3.4	3.5	...
15	3.6	3.5	3.7	3.7	3.3	3.3	4.3	4.5	4.6	...c	...c	5.1	5.3	5.5	5.6	5.8	5.7	5.6	5.5	5.4	5.1	4.2	3.9	3.7	...
16	3.5	3.4	3.5	3.5	3.5	3.5	4.7	5.4	5.2	5.5	5.3	5.7	5.9	6.5	7.1	p8.1	6.8	5.6	6.3	6.0	5.9	5.3	5.0	5.0	5.3
17	4.8	4.0	3.7	3.2	2.8	3.3	4.3	4.6	4.7	4.7	5.0	4.2	5.0	4.7	4.9	5.3	5.6	5.3	5.0	5.2	4.9	3.9	3.4	3.6	4.4
18	3.6	3.5	4.1	...f	...f	3.5	4.7	4.5	4.7	4.8	5.3	6.0	6.6	7.3	6.8	7.1	8.9	7.2	p8.3	6.8	7.5	6.3	5.3	5.0	...
19	4.1	3.9	3.0	2.2	2.2	2.7	3.7	3.8	4.0	4.8	...a	...c	5.6	6.1	6.5	6.4	6.3	6.2	6.4	6.1	5.5	4.6	4.1	3.9	...
20	4.0	3.8	3.8	...f	...f	3.1	4.5	4.8	4.8	4.2	4.2	...a	...a	5.2	5.3	...a	4.8	5.4	5.7	4.8	4.4	4.2	3.0	3.2	...
21	3.2	...f	2.7	2.5	...f	...f	3.7	3.6	...a	...a	...a	...a	...a	4.8	5.3	5.3	4.8	5.0	5.2	5.6	4.4	3.3	3.3	3.3	...
22	3.3	3.0	2.5	2.6	2.7	2.9	...c	...c	...c	3.9	4.3	4.4	4.8	5.0	4.9	5.0	4.7	5.2	4.8	5.0	3.7	3.1	2.7	2.7	...
23	2.7	2.8	2.8	2.4	2.4	3.1	4.1	4.5	4.3	4.5	4.6	4.7	4.3	4.9	4.7	4.6	4.8	4.5	4.4	5.0	4.5	3.5	3.2	3.1	3.9
24	3.0	3.0	2.2	1.9	2.1	2.7	3.3	3.6	...a	4.2	4.7	...a	4.6	4.6	4.7	4.7	4.9	4.7	4.4	4.3	3.8	3.4	3.4	3.2	...
25	3.0	2.9	2.7	1.6	1.5	2.6	...c	...c	4.2	4.0	4.2	4.8	4.5	5.0	5.0	5.0	4.9	4.5	4.9	4.4	5.1	4.6	4.5	4.2	...
26	3.9	3.3	2.4	1.9	1.9	2.5	3.3	3.5	3.8	3.9	4.0	4.2	4.2	4.2	4.6	4.6	4.2	4.3	4.3	...a	4.1	3.6	3.3	3.8	...
27	3.8	2.7	2.7	...f	...f	...a	3.3	3.7	3.8	4.8	4.8	...a	...a	...a	4.6	4.3	4.6	4.2	4.5	4.7	5.2	4.4	4.3	3.7	...
28	3.4	...a	...a	...f	...f	...a	3.7	...a	4.7	...a	...a	...a	p5.1	4.7	4.9	4.7	5.2	4.7	5.5	5.1	4.6	3.9	3.7	3.6	...
29	3.2	3.0	2.6	2.4	2.5	2.8	3.8	4.1	4.4	4.4	4.9	...a	p6.2	...a	6.0	6.3	5.7	6.3	6.6	6.5	6.4	6.1	5.6	5.6	...
30	4.7	3.4	2.6	1.9	2.0	3.7	4.8	5.4	6.2	7.2	8.0	p7.8	7.2	7.3	7.4	6.5	...a	p5.7	5.9	5.5	5.2	4.6	4.7	4.7	...
31																									
MEAN*	3.6	3.2	2.9	2.6	2.6	3.0	4.0	4.2	4.5	4.6	4.8	5.1	5.3	5.4	5.5	5.6	5.4	5.2	5.2	5.1	4.8	4.2	3.9	3.8	4.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 264

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1943 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — NOVEMBER 1943

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	210	...a	...a	...a	295	310	260	400	...	...c	...c	...c	...a	...	...	...	...	350	250	250	240	265	280	260	...
2	250	250	...a	240	...a	...a	245	250	...	...	...	...	...a	...	...	...	360	280	250	230	220	240	310	270	...
3	240	260	...a	...a	270	265	240	270	220	400	395	520	380	320	300	290	280	265	230	230	250	260	250	250	...
4	275	230	220	250	260	230	230	290	360	350	450	380	340	295	300	300	280	285	240	240	230	220	260	250	282
5	240	240	240	230	...a	230	240	...	...c	360	340	330	320	400	300	320	300	300	250	220	210	...a	300	290	...
6	260	...a	...a	...a	...a	260	...	...	...	...	...	...	...	440	400	360	370	305	225	240	235	270	...a	...a	...
7	...a	...a	...a	235	250	285	260	...	...	...	...	...a	...	400	430	...	...	235	260	240	250	260	...a	...a	...
8	...a	...a	...a	...a	300	...a	410	230	430	...	390	380	300	340	330	...c	...c	...c	...c	...c	230	240	250	240	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...	...	345	350	...	330	300	230	230	250	250	240	240	...
10	...a	235	250	230	270	250	...c	...c	...c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	300	300	290	230	230	240	250	240	260	250	...
13	260	260	270	...a	280	290	250	360	300	290	...	...a	...a	...a	...a	305	300	280	250	240	...a	...a	280	260	...
14	...a	250	240	...a	250	250	235	...	315	320	320	...c	320	340	350	305	290	290	250	220	220	220	260	280	...
15	280	280	270	...a	240	250	...a	220	375	...c	...c	350	380	350	330	320	300	280	260	...a	210	230	240	240	...
16	...a	...a	290	...a	...a	250	245	285	290	290	370	345	p360	330	345	p300	265	285	260	235	240	240	270	240	...
17	210	230	230	210	240	250	280	340	380	330	370	...	...	...	...	350	p315	300	230	...a	225	240	260	260	...
18	260	270	260	...a	250	230	200	260	370	...	400	350	320	310	350	380	280	320	p265	260	240	220	...a	...a	...
19	...a	...a	...a	290	270	280	240	...	...	...	...a	...c	360	...a	325	315	310	285	230	220	215	250	235	...a	...
20	...a	260	...a	...f	220	260	200	280	...	...	...	...a	...a	450	380	...a	420	340	...a	...a	...a	...a	...a	...a	...
21	...a	...a	...a	...a	...a	...a	240	...	...a	...a	...a	...a	...a	...	400	380	420	365	295	230	250	270	300	300	...
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...	470	465	450	395	430	300	300	230	220	260	275	320	...
23	280	265	250	240	240	250	240	340	...	465	...	450	...	430	470	470	365	370	240	250	220	270	260	265	...
24	270	210	280	320	300	265	250	...	...a	...	...a	...a	...	...	480	440	350	350	260	250	250	275	260	280	...
25	280	250	235	320	330	290	250	...c	...	...	...	420	...	440	430	385	380	400	260	260	240	260	265	260	...
26	250	240	255	310	330	295	265	...	...	...	...	...	...	...	430	465	500	400	260	...a	280	...a	270	275	...
27	245	215	220	240	...f	220	255	...	...a	400	...	...a	...a	...a	480	...	480	420	350	300	250	...a	...a	...a	...
28	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	p400	460	440	...	350	400	295	...a	...a	...a	270	250	...
29	260	...a	250	290	265	250	270	...	...	...	...	390	p375	p330	360	335	345	330	280	240	250	250	...a	...a	...
30	...a	...a	270	200	280	...a	265	275	300	310	300	p285	320	300	295	...a	...a	p300	...a	...a	...a	...a	...a	...a	...
31																									
MEAN*	254	247	252	258	265	260	253	292	334	356	371	382	357	375	385	354	346	317	258	241	236	249	266	264	299

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 265

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	3.5	3.7	...c	...c	...c	...a	4.1	4.1	...	3.9	3.6	...
2	...	3.0	3.8	3.9	4.1	4.1	...a	4.1	4.1	4.0	3.8	3.5	...
3	...	3.6	...	4.2	4.3	4.4	4.3	4.3	4.2	4.2	4.0	3.6	...
4	...	3.8	4.2	4.2	4.4	4.4	4.4	4.4	4.3	4.2	4.0	3.6	...
5	...	4.4	...c	4.2	4.3	4.4	...a	4.4	4.1	4.1	3.9	3.6	...
6	...	3.4	3.7	4.0	4.1	4.1	4.2	4.1	4.0	4.0	3.9	...	...
7	...	3.6	3.8	3.9	4.0	...a	4.8	4.1	4.0	4.0	3.8	...	...
8	...	...	3.9	4.2	4.2	4.3	4.3	4.2	4.2	...c	...c	...c	...
9	...	...c	...c	4.0	4.0	4.2	4.2	4.1	4.2	4.1	...	...	...
10	...	...c	...c	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	4.2	4.1	3.9	...	...
13	...	3.8	4.0	4.2	4.3	...a	...a	...a	...a	4.2	3.9	3.6	...
14	...	3.8	4.0	4.2	4.2	...a	4.3	4.2	...a	4.1	3.9	3.6	...
15	...	...	4.1	...c	...c	4.2	4.3	4.2	4.1	4.0	3.9	3.6	...
16	...	3.9	4.1	4.3	4.4	...a	4.5	4.4	4.2	4.2	4.0	3.6	...
17	...	3.7	4.0	4.2	4.3	4.3	4.3	4.3	4.2	4.1	3.9	...a	...
18	...	...	4.0	4.3	4.3	4.4	4.4	4.4	4.3	4.2	4.0	3.7	...
19	...	3.8	3.9	4.2	4.3	4.3	4.4	...a	4.4	4.2	4.0	3.7	...
20	...	3.6	4.5	4.0	4.1	...a	...a	4.1	4.3	...a	3.8	3.6	...
21	...	3.6	...a	...a	...a	...a	...a	4.2	4.1	4.0	3.8	3.6	...
22	...	...c	...c	3.9	4.1	4.2	4.2	4.1	4.1	4.0	3.9	3.6	...
23	...	3.7	3.9	4.0	4.0	4.2	4.1	4.1	4.0	3.9	3.8	3.6	...
24	...	3.4	...a	4.0	...a	...a	4.1	4.1	4.0	3.9	3.8	3.6	...
25	...	...c	3.9	4.0	4.1	4.2	4.2	...a	4.0	3.9	3.9	3.7	...
26	...	3.3	3.7	3.8	4.0	4.2	4.2	4.1	4.1	4.0	3.8	3.6	...
27	...	3.5	...a	3.9	...a	...a	...a	...a	4.1	4.0	3.8	3.6	...
28	...	...a	...a	...a	...a	...a	p4.3	4.2	4.1	4.0	3.8	3.6	...
29	...	3.7	3.9	4.2	4.2	...a	p4.3	p4.4	4.3	4.1	4.1	3.8	...
30	...	...	...a	...a	4.3	...a	4.6	...a	...a	...a	...a	...a	...
31													
MEAN*	...	3.6	4.0	4.1	4.2	4.3	4.3	4.2	4.2	4.1	3.9	3.6	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	220	220	...c	...c	...c	...a	...a	...a	...	230	230	...
2	...	...	260	260	195	215	...a	205	200	205	220	240	...
3	...	220	...	220	...a	...a	...a	...a	...a	220	230	220	...
4	...	230	225	200	220	220	195	225	200	210	200	220	...
5	...	220	...c	250	250	...a	...a	...a	225	220	...a	230	...
6	...	235	...	225	200	240	230	...a	215	220	...	...	...
7	...	220	220	200	210	...a	...a	260	215	215	235	...	...
8	...	...	210	220	200	220	215	220	210	...c	...c	...c	...
9	...	...c	...c	210	...a	230	220	...a	225	220	...	...	...
10	...	...c	...c	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...a	220	220	...	...
13	...	240	230	...a	...a	...a	...a	...a	...a	240	250	220	...
14	...	240	230	...a	...a	...a	...a	...a	...a	...a	230	230	...
15	...	...	220	...c	...c	200	200	220	210	210	220	220	...
16	...	245	230	200	250	...a	...a	...a	...a	...a	220	215	...
17	...	240	220	...a	...a	200	...a	240	...	...	200	...a	...
18	...	...	200	...a	...a	240	...a	...a	230	...a	250	230	...
19	...	235	230	...a	200	220	...a	...a	...a	...a	225	230	...
20	...	220	220	...a	...a	...a	...a	...a	...a	...a	260	...a	...
21	...	...a	...a	...a	...a	...a	...a	...a	235	250	225	235	...
22	...	...c	...c	200	...a	220	...a	...a	230	225	240	230	...
23	...	230	...a	245	210	200	190h	200h	...a	235	250	230	...
24	...	240	...a	...a	...a	...a	...a	240	250	240	250	240	...
25	...	...	220	...a	230	...a	...	...a	225	...a	240	230	...
26	...	240	220	...a	200	225	220	...	220	220	230	230	...
27	...	250	...a	210	...a	...a	...a	...a	...a	235	230	235	...
28	...	...a	...a	...a	...a	...a	...a	...a	...a	210	...a	235	...
29	...	215	...a	230	...a	...a	...a	...a	...a	...a	...a	240	...
30	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
31													
MEAN*	...	232	224	221	215	219	210	226	221	223	231	230	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 266

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1943 NOVEMBER 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.8	0.9	1.1	...c	...c	...c	0.9	1.0	1.0	1.0	0.8	0.7	0.8	1.9	2.4	2.7	...c	...c	...c	3.2	3.1	2.9	2.8	2.7	2.3	1.7
2	0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.7	2.0	2.6	3.2	3.1	3.1	3.2	3.2	2.8	2.4	3.1	2.7	2.5	1.6
3	1.0	1.0	1.0	1.0	1.4	1.1	1.1	1.1	1.1	1.0	0.8	0.7	0.8	...	2.6	2.7	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.0	2.3	1.8
4	0.8	0.8	1.0	1.1	1.1	1.1	1.0	1.1	1.1	1.1	0.9	0.9	1.0	2.3	2.9	2.9	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.4	1.6
5	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	2.3	2.5	2.8	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.3	1.6
6	0.7	0.7	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.7	...	2.1	2.5	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.3	...
7	0.7	0.7	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.0	0.9	0.8	2.1	2.4	2.7	2.7	2.8	2.9	3.1	3.1	3.1	3.1	2.5	2.4	1.7
8	0.7	0.7	1.0	1.1	1.1	1.1	1.1	1.0	1.1	...c	...c	...c	...c	2.1	2.5	2.7	3.0	3.1	3.1	3.1	3.1	2.9	...c	...c	...c	...c
9	...c	...c	...c	0.9	0.9	1.0	1.0	1.1	1.0	1.0	0.8	0.7	...	...c	...c	...c	3.1	3.2	3.2	3.2	3.1	3.1	2.9	2.7	2.3	...
10	0.7	0.7	1.0	...	...	...	...	...	...	...	...	...	...	2.1	2.5	2.8	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	1.4	0.9	...e	...e	...	...	...	...	...	...	...	...	...	3.2	2.9	2.7	2.3	2.1
13	...e	...e	...e	1.0	1.1	1.0	0.9	1.0	1.1	0.9	...e	...e	...	2.2	2.5	2.8	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.0	2.5	1.7
14	...e	0.7	0.7	1.0	1.0	1.0	1.1	1.0	1.0	0.9	0.8	0.8	0.7	2.3	2.7	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.8	2.4	1.7
15	...e	...e	1.0	...c	...c	1.1	1.1	1.0	0.8	0.8	0.8	...e	...e	...a	2.6	2.9	...c	...c	3.1	3.1	3.2	3.2	2.9	2.5	...a	...a
16	...e	0.7	0.7	0.8	0.8	1.0	0.9	1.0	0.8	0.9	...e	...e	...e	2.0	2.4	2.8	3.1	3.1	3.2	3.2	3.1	3.1	3.1	2.7	2.4	1.9
17	...e	...e	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.8	0.8	...e	...e	1.9	2.5	2.8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.8	2.4	1.7
18	...e	...e	0.8	1.0	1.1	1.1	1.1	1.1	1.0	1.0	0.8	...e	...e	2.1	2.6	2.9	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.4	1.7
19	...e	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	...e	1.9	2.5	2.9	3.2	3.1	3.2	3.2	3.2	3.2	3.0	2.9	2.4	1.6
20	...e	...e	1.0	0.8	1.0	0.8	0.9	1.0	1.0	0.9	0.8	...e	...e	...	2.6	2.9	3.1	3.1	3.1	3.1	3.2	3.0	2.6	2.6	2.7	2.8
21	0.6	0.7	0.8	0.9	0.8	1.0	1.0	1.0	1.1	0.9	0.7	0.7	0.7	2.0	2.4	2.8	3.1	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.3	1.8
22	...c	...c	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.8	1.9	2.4	2.7	3.0	3.1	3.2	3.2	3.2	3.2	3.1	2.8	2.4	1.9
23	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.9	0.8	0.8	...e	1.9	2.5	2.7	3.1	3.2	3.2	3.2	3.2	3.1	3.1	2.7	2.4	1.9
24	...c	0.8	0.8	0.8	0.9	0.8	1.0	1.1	1.0	1.1	0.8	0.7	...e	...c	2.4	2.7	2.9	...a	3.1	3.2	3.2	3.2	3.2	2.8	2.4	2.0
25	0.8	0.7	0.8	0.8	0.8	1.1	1.0	1.0	0.9	0.8	0.8	0.8	...e	...c	2.5	2.8	3.0	3.1	3.2	3.2	3.2	3.2	3.1	2.7	2.3	1.9
26	...e	0.8	1.0	0.8	1.0	1.0	1.0	1.0	1.0	0.7	0.8	0.8	...e	2.2	2.2	2.7	2.9	3.0	3.1	3.2	3.2	3.2	3.2	2.8	2.3	1.8
27	0.8	0.7	0.8	0.8	0.8	1.0	1.1	1.1	1.1	0.9	0.8	0.8	0.8	2.0	2.5	2.8	3.1	3.2	3.2	3.2	3.2	3.2	3.1	2.9	2.4	1.8
28	0.8	0.8	0.9	0.9	1.0	0.9	0.9	1.0	0.9	0.9	0.8	...e	...e	2.1	2.5	2.8	3.1	3.2	3.2	3.2	3.2	3.2	3.1	2.8	2.5	1.9
29	0.7	0.7	0.8	0.8	0.8	1.1	1.0	1.0	0.9	0.8	0.8	0.7	0.7	2.5	2.5	2.8	3.2	3.1	3.2	3.2	3.2	3.1	3.1	2.8	2.4	2.0
30	0.6	0.7	0.8	0.9	0.9	1.1	1.0	0.9	0.9	0.8	0.7	0.8	...e	2.1	2.5	2.9	3.2	3.1	3.1	3.2	3.2	3.2	2.9	2.8	2.4	...
31																										
* MEAN	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	2.1	2.5	2.9	3.1	3.1	3.2	3.2	3.2	3.1	3.0	2.8	2.4	1.8

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 267

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1943 | DECEMBER 1943

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.5	4.2	3.7	2.1	1.8	3.1	4.2	4.5	4.4	4.5	4.6	4.7	4.9	5.0	5.3	5.3	5.2	5.2	4.8	4.9	5.0	4.3	4.4	4.4	4.4
2	3.6	3.4	3.3	3.2	3.3	3.3	4.6	5.5	6.4	7.2	8.1	8.0	7.1	7.1	8.0	8.0	7.2	6.2	6.0	5.5	4.6	4.6	4.6	4.4	5.6
3	...f	3.5	3.8	2.9	2.6	2.8	3.5	3.4	...a	3.9	4.7	4.5	4.8	5.4	5.0	5.2	5.0	4.9	4.7	4.1	4.4	4.1	3.9	...f	...
4	4.0	...a	...f	...f	...f	...f	3.3	3.7	4.0	4.2	...a	4.6	...a	5.1	...a	5.3	...a	4.5	4.7	4.5	...a	4.4	4.2	...a	...
5	...a	...a	...a	...a	...f	2.9	p3.1	4.4	4.3	4.7	5.0	p4.8	5.2	5.3	5.9	5.7	5.1	5.1	4.8	4.3	4.5	4.3	4.2	4.0	...
6	3.9	3.8	2.7	1.7	1.8	...c	...c	...c	...c	4.5	4.8	5.2	5.0	...a	5.2	...a	...a	...a	...a	5.5	4.9	4.3	...f	3.2	...
7	3.2	3.1	3.0	3.0	2.7	3.5	4.5	5.4	5.6	6.1	6.3	7.1	7.2	7.4	7.5	7.4	...a	6.4	6.6	6.8	6.5	5.4	5.0	...c	...
8	4.9	4.9	3.7	2.8	2.7	3.5	4.8	5.6	5.6	6.2	7.0	7.4	7.7	7.7	7.5	...c	7.0	6.6	6.6	6.5	6.7	6.2	6.0	5.6	...
9	5.2	4.2	3.9	3.9	3.8	3.9	4.4	5.3	5.3	5.6	6.2	6.7	7.1	6.8	6.3	6.6	7.1	7.1	7.1	6.4	5.9	5.5	5.2	...a	...
10	...a	3.9	3.4	3.2	3.2	3.8	5.4	5.0	5.5	6.6	6.8	...a	8.0	7.9	7.6	6.7	6.7	6.7	7.2	6.2	5.8	5.6	5.7	5.4	...
11	4.7	4.2	4.2	3.5	2.5	3.3	4.9	5.2	5.2	5.0	5.0	...a	...a	6.1	6.5	6.1	5.4	5.6	5.5	5.5	5.3	4.4	3.7	3.5	...
12	3.5	3.7	4.1	...f	...f	3.4	4.4	4.5	...f	5.0	...a	5.6	6.0	6.7	6.3	5.9	6.2	6.1	6.0	5.7	5.6	5.2	5.0	4.6	...
13	4.3	...a	4.4	...f	...a	...a	3.9	...c	4.9	5.3	6.4	7.6	...a	...a	...a	6.9	6.2	...a	...a	6.0	5.5	5.2	5.1	4.5	...
14	5.2	4.0	3.9	3.4	3.3	3.5	4.5	4.6	4.7	5.2	...a	...a	...a	6.3	6.8	7.1	7.1	6.5	5.7	5.4	4.8	4.4	4.8	4.9	...
15	4.9	5.0	4.1	3.9	...f	3.6	...c	...c	5.1	6.0	6.5	7.5	7.7	7.6	7.5	7.3	6.1	5.2	5.2	5.2	5.7	5.4	5.0	4.2	...
16	4.1	4.0	p3.6f	3.3	3.3	3.6	4.9	4.7	5.2	5.7	6.0	8.2	8.5	8.8	7.6	7.2	6.1	5.6	5.8	7.2	6.6	7.0	5.8	5.3	5.8
17	4.6	4.3	...a	...f	2.7	2.7	3.7	p4.0a	4.5	...a	5.3	5.6	7.0	...a	...a	...a	p5.6	5.3	6.1	5.9	6.4	6.0	5.9	...f	...
18	5.0	4.3	1.9	1.8	2.1	2.7	4.1	4.0	5.0	4.9	p6.4	6.6	6.6	6.7	5.5	5.2	4.7	5.1	5.3	5.7	5.6	4.8	4.8	4.8	4.7
19	4.3	4.5	4.0	3.2	2.9	2.9	3.5	4.2	4.9	5.6	6.3	p5.8	6.8	7.9	7.1	6.7	5.8	p6.0a	...c	...c	...c	...c	...c	...c	...
20	5.2	4.0	3.1	2.7	2.8	3.0	3.9	4.2	4.1	...a	p5.3	6.3	7.4	7.4	8.0	7.2	5.9	5.8	6.4	6.0	p5.8c	5.7	5.7	6.1	...
21	5.0	...c	...c	...c	...c	3.0	...c	...c	...c	4.5	4.6	5.0	p4.9a	p5.9a	p5.6a	5.3	5.6	5.6	5.5	p5.8c	5.1	4.5	3.6	4.0	...
22	p4.2f	4.7	4.0	3.6	3.3	3.5	3.6	4.0	4.3	4.8	5.3	p6.0c	5.9	...a	7.1	5.8	5.9	p6.1c	6.3	7.1	5.6	p5.0f	4.5	4.3	...
23	3.8	3.8	3.5	p3.5f	3.5	3.6	4.2	4.2	4.4	4.6	6.0	6.4	6.4	6.6	6.6	p6.5a	6.0	6.5	6.9	7.4	6.5	5.5	4.6	4.6	5.2
24	4.6	4.0	4.0	3.6	3.6	3.6	4.3	4.5	4.5	4.7	5.0	5.5	5.7	5.9	6.9	7.0	6.5	5.9	5.9	6.1	5.8	5.1	4.7	4.6	5.1
25	4.5	4.0	3.8	3.7	3.0	p3.5c	4.5	5.2	5.5	6.2	5.7	...c	...a	5.6	7.0	7.6	6.9	6.7	5.9	6.8	7.0	5.4	4.8	4.4	...
26	4.5	4.3	3.6	3.6	3.6	3.7	...c	...c	4.8	4.9	5.2	5.1	5.3	5.1	5.5	5.4	5.4	5.5	5.6	6.2	6.6	5.9	5.5	5.4	...
27	5.5	5.0	4.0	3.4	2.9	2.9	p4.2c	...c	...c	5.3	5.3	p5.5c	6.3	6.4	7.0	6.8	4.6	6.0	5.9	6.1	6.4	6.0	5.6	5.6	...
28	5.1	4.9	4.8	3.5	3.1	3.3	4.7	5.2	6.6	5.9	p6.2c	6.7	5.8	p5.5c	5.5	5.4	5.4	5.5	6.0	5.7	5.2	5.2	5.0	4.8	5.2
29	4.4	4.2	3.9	3.3	3.0	p3.8c	4.7	5.2	6.0	6.7	p6.9c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.4	6.0	5.7	4.8	...
30	...c	...c	...c	...c	...c	3.0	...c	...c	...c	4.3	...c	...a	...c	6.4	p6.2c	...c	5.5	5.5	5.2	4.7	4.5	4.6	4.4	4.4	...
31	4.1	4.3	4.4	3.7	2.6	3.6	4.5	4.9	5.8	5.9	6.6	7.2	8.3	9.1	8.1	8.0	6.7	5.9	5.8	p6.0c	6.2	6.5	6.7	6.1	5.9
MEAN*	4.5	4.2	3.7	3.2	2.9	3.3	4.2	4.6	5.1	5.3	5.8	6.1	6.5	6.6	6.6	6.4	6.0	5.8	5.8	5.8	5.7	5.2	5.0	4.7	5.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 268

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1943 | DECEMBER 1943

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	255	210	...a	250	240	235	230	440	...	...	470	430	460	355	370	380	300	250	250	260	245	295	280	...
2	290	280	250	285	220	240	255	370	330	330	330	300	...a	375	315	300	280	295	240	260	250	280	270	270	...
3	...f	...f	250	300	330	300	...	...	...a	...	...	...a	...a	340	440	360	390	350	300	250	270	...a	...a	...f	...
4	240	...a	...a	...f	...f	...f	240	...	...	...	...a	...a	...a	420	...a	...a	...a	390	300	...a	...a	...a	...a	...a	...
5	...a	...a	...a	...a	...f	...f	275	395	...	...	440	...	400	410	375	325	400	340	280	...a	...a	310	...a	270	...
6	260	230	...a	...a	...c	...c	...c	...c	...c	480	260	395	450	...a	395	...a	...a	...a	...a	...a	...a	...a	...a	275	...
7	240	270	...a	250	...a	230	230	300	310	295	355	310	330	315	300	...c	...a	315	300	...a	...a	250	...a	...c	...
8	260	230	...a	240	250	220	230	240	280	300	310	310	325	310	305	...c	290	280	250	...a	240	...a	250	...a	...
9	225	...a	...a	...a	255	260	240	240	270	370	...a	...a	310	...a	330	...a	315	300	230	230	260	295	...a	...a	...
10	...a	...a	260	...a	250	250	235	250	...a	330	330	...a	...a	315	310	320	320	290	250	...a	...a	270	240	240	...
11	210	260	230	220	235	...a	...a	320	295	430	470	...a	...a	365	315	310	370	300	...a	...a	...a	240	...a	...a	...
12	...a	...a	...a	...f	...f	220	235	295	...f	395	...a	...a	365	315	310	340	300	290	...a	230	220	245	260	...a	...
13	...a	...a	...a	...f	...a	...a	240	...c	...	...a	360	330	...a	...a	...a	295	320	...a	...a	...a	...a	280	...a	...a	...
14	...a	...a	260	240	250	240	230	230	235	400	...a	...a	...a	350	320	290	280	260	...a	...a	240	275	280	265	...
15	...a	...a	250	200	...f	225	...c	...c	400	325	370	...a	...a	...a	...a	290	230	...a	...a	...a	240	255	...a	295	...
16	...a	...a	...a	235	260	250	230	360	340	360	420	330	300	...c	...c	...c	300	320	365	250	270	250	290	290	...
17	280	260	...a	...a	280	290	...a	...a	...a	...a	...a	410	...a	...a	...a	...a	p340	...a	320	250	270	290	...a	...a	...
18	...a	...a	...a	295	300	270	250	325	380	...a	p335	330	...a	...a	350	350	460	340	...a	...a	240	275	270	...a	...
19	...a	...a	...a	...a	240	240	380	...a	...a	355	330	p440	...a	300	275	290	320	p310a	295	255	240	265	270	255	...
20	250	260	275	295	275	265	230	190	...a	...a	...a	...a	...a	310	300	...a	...a	...a	...a	240	...c	270	...a	...a	...
21	...a	...a	...a	...a	...a	280	...c	...c	...c	480	...a	440	...a	340	...a	...a	350	300	300	...a	...a	260	250	265	...
22	240	255	230	250	270	260	240	220	...	...a	440	360	390	...a	300	355	345	p330	300	270	...a	...a	270	270	...
23	260	270	265	290	255	250	215	235	...a	...a	350	...a	350	...a	330	300	355	310	290	230	215	230	240	250	...
24	245	265	250	250	260	250	270	215	...	...	420	430	380	405	320	305	300	300	...a	...a	240	...a	...a	...a	...
25	...a	...a	...a	...a	210	...c	...c	...c	...a	300	...a	...c	...a	400	290	300	305	...a	...a	260	235	250	...a	280	...
26	250	240	260	295	250	250	...c	...c	410	390	375	410	390	430	370	390	400	330	300	265	250	250	270	250	...
27	250	230	220	260	250	...a	p260	...c	...c	380	300	350	320	350	300	335	290	220	...a	...c	...c	265	250	270	...
28	270	260	235	240	300	250	...a	...a	...a	...a	...a	315	380	425	360	400	370	335	290	240	...a	280	...a	...a	...
29	...a	...a	255	...a	250	...a	250	...c	...c	295	...c	...c	...c	...c	...c	...c	...c	300	...c	...c	...a	...a	...a	...a	...
30	...c	...c	...c	...c	...c	260	...c	...c	...c	...	...c	...c	...c	315	p340c	...c	340	310	250	250	250	265	265	275	...
31	...a	...a	235	...a	260	240	235	235	315	375	360	360	330	300	300	280	300	300	300	...c	...c	...c	...c	...c	...
MEAN*	251	255	246	259	259	251	248	274	334	366	375	370	363	360	329	325	333	309	285	249	246	265	265	269	295

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 269

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1943

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.2	4.1	3.8	...
2	...	4.0	4.2	4.3	4.5	4.5	...a	...a	4.3	4.3	4.1	3.8	...
3	3.2	3.4	...a	3.7	4.3	4.3	4.2	4.2	4.2	4.1	3.9	3.8	2.8
4	...	3.5	3.8	4.0	...a	4.1	...a	4.2	...a	...a	...a	3.8	...
5	...	3.8	4.0	4.0	4.2	4.2	4.3	4.3	4.2	4.1	4.0	3.8	...a
6	...	...c	...c	4.1	4.3	4.3	4.5	...a	4.2	...a	...a	...a	...
7	...	...a	4.2	4.3	4.4	4.5	4.5	...a	...a	...a	...a	...a	...a
8	...	...	4.2	...a	4.4	4.4	...a	4.5	4.4	...c	4.0	3.8	3.2
9	...	...	...	...a	...a	...a	...a	...a	4.3	...a	4.1	...a	...
10	...	...	...a	4.4	4.5	...a	...a	4.5	4.3	4.3	4.1	3.9	...
11	...	4.0	4.0	4.3	4.4	...a	...a	4.3	4.3	4.1	4.1	3.8	...a
12	...	...	...	4.3	...a	...a	...a	4.3	4.3	4.3	4.0	...a	...
13	...	...c	...h	...a	...a	...a	...a	...a	...a	4.3	4.1	...a	...
14	...	...	...	4.3	...a	...a	...a	...a	...a	4.2	...a	3.8	...a
15	...	...	...	4.1	4.4	...a	...a	...a	...a	...a	...a	...	...
16	...	4.0	4.1	4.3	4.3	...a	...a	...a	...a	4.2	4.1	3.7	3.4
17	...	...a	...a	...a	...a	...a	...c	...a	...a	...a	...a	...a	...
18	...	3.7	...a	...a	p4.2	4.3	...a	...a	4.2	4.2	4.3	3.9	...
19	...	...	...a	4.2	...a	...a	...a	4.4	4.3	4.3	4.1	...a	...
20	...	...	...	...a	...a	...a	...a	...a	4.3	...a	...a	...a	...a
21	...	...	...	...a	...a	...a	...a	...a	...a	...a	4.1	3.8	...
22	...	...	3.9	...a	4.2	4.4	...a	...a	...a	4.2	4.1	p4.0c	...
23	...	...	...	...a	4.5	...a	...a	...a	4.4	p4.3a	4.1	4.0	...
24	...	...	4.2	4.3	4.2	4.4	4.5	4.4	4.4	4.3	3.2	3.9	...
25	...	...	...	4.4	...a	...a	...a	4.5	...a	4.3	...a	...a	...
26	...	...	4.0	4.2	4.4	4.5	4.4	...a	4.4	4.3	4.1	...	...
27	...	...	...c	4.3	4.5	4.5	4.5	4.5	4.5	4.4	4.3	...	...
28	...	...	...	...a	...a	4.4	4.5	4.4	4.4	4.3	4.2	3.8	...
29	...	...	...	...c	...c	...c	...c	4.6	4.4	4.3	4.3	4.0	...
30	...	...	...	4.1	...c	...a	...c	4.3	p4.3c	4.2	4.1	3.9	...
31	...	...	4.1	4.5	4.4	...a	4.4	...a	...a	...a	4.2	4.0	3.2
* MEAN	3.2	3.8	4.1	4.2	4.4	4.4	4.4	4.4	4.3	4.2	4.1	3.9	3.2

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	200	205	215	220	...a	...a	...a	...a	200	220	...
2	...	250	...a	...a	...a	...a	...a	...a	...a	...a	240	220	...
3	260	p180	...a	...	...a	...a	...a	235	...a	...a	...a	230	220
4	...	245	...	...	...a	210	...a	200	...a	...a	...a	210	...
5	...	230	200	240	210	240	220	220	...a	...a	210	215	...a
6	...	...c	...c	220	215	200	...a	...a	225	...a	...a	...a	...
7	...	...a	220	220	...a	215	...a	...a	...a	...a	...a	...a	...a
8	...	...	245	...a	240	...a	...a	...a	...a	...c	225	250	240
9	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
10	...	...	...	...a	...a	...a	...a	...a	...a	225	...a	230	...
11	...	230	220	225	...a	...a	...a	...a	...a	...a	220	230	...a
12	...	...	...	225	...a	...a	...a	...a	...a	240	...	...a	...
13	...	...c	...h	...a	...a	...a	...a	...a	...a	...a	230	...a	...
14	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	220	...a
15	...	...	...c	210	250	...a	...a	...a	...a	...a	...a	...	...
16	...	215	205	230	...a	...a	...a	...a	...a	...c	225	200	245
17	...	...a	...a	...a	...a	...a	...c	...a	...a	...a	...a	...a	...
18	...	245	...a	...a	...a	210	...a	...a	235	220	255	...a	...
19	...	...	...	...a	...a	...a	...a	240	...a	...a	...a	...a	...
20	...	...	...	...a	...a	...a	...a	...a	220	...a	...a	...a	...a
21	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	225	...
22	...	...	190	...a	...a	...a	...a	...a	...a	...a	250	...a	...
23	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	220	...
24	...	...	180	190	190	200	230	200	...a	230	250	230	...
25	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
26	...	...	230	210	200	200	220	...a	...a	215	...a	...	...
27	...	...c	...c	230	...c	210	195	210	210	210	220	...	...
28	...	...	...	...a	...a	190	190	...a	200	235	230	220	...
29	...	...	...	...c	...c	...c	...c	...a	200	200	260	250	...
30	...	...	...	230	...c	...a	...c	...c	p180c	240	235	230	...
31	...	...	220	260	...a	...a	...a	...a	...a	...a	250	200	240
* MEAN	260	228	211	223	217	210	211	218	210	224	233	224	236

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^Df2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 270

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1943 DECEMBER 1943

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.8	0.8	0.9	0.9	0.9	0.8	1.0	0.9	0.8	0.8	0.7	...e
2	0.7	0.8	0.9	0.9	0.9	0.6	1.0	0.9	0.9	0.8	0.8	0.6	...e
3	...e	0.8	1.0	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7
4	...	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.6
5	0.7	0.8	...c	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.7	0.7
6	...c	...c	...c	0.8	0.9	1.0	0.9	1.0	1.1	1.0	0.8	0.8	0.7
7	...	0.8	0.8	0.9	0.9	1.1	1.0	1.0	1.4	...c	...c	1.0	0.8
8	0.7	0.8	0.8	0.8	0.8	0.8	1.0	1.0	1.0	...c	1.0	0.8	...e
9	...e	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.9	0.9	0.8	0.8	0.6
10	...e	0.8	1.0	0.9	1.0	1.0	0.9	1.0	1.1	1.0	0.8	0.8	0.8
11	...e	...e	0.8	0.8	0.8	0.9	0.9	0.8	0.9	0.8	0.8	0.7	0.7
12	...e	...e	0.8	0.7	0.7	0.9	0.8	1.0	0.9	0.9	0.8	0.7	...e
13	...e	0.7	0.9	0.8	0.8	0.9	...a	...a	...a	0.9	0.8	0.8	...e
14	0.7	0.7	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8
15	...e	...c	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.6
16	0.7	0.7	0.8	0.9	0.9	0.8	1.0	0.9	0.9	0.9	0.8	0.8	0.7
17	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.8	0.8
18	0.7	0.7	0.8	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.9	0.8	0.6
19	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7
20	0.6	0.7	1.0	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7
21	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6
22	0.7	0.7	0.9	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.8	0.8	0.7
23	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.8	0.7	0.7	0.6
24	0.6	0.8	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.7	0.7
25	0.6	0.7	0.8	0.8	1.0	1.1	1.0	1.0	1.0	1.0	0.8	0.7	0.7
26	...c	...c	0.8	0.8	0.9	0.9	1.1	...c	1.1	1.1	0.8	0.7	0.7
27	0.6	0.7	0.8	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	0.7	...e
28	0.7	0.8	1.0	1.0	1.1	1.0	1.1	1.0	1.0	1.0	1.0	0.7	0.7
29	0.7	0.7	0.8	0.9	...c	...c	...c	0.9	0.8	0.8	0.8	0.7	0.6
30	0.6	0.6	0.7	1.0	...c	1.0	...c	1.0	1.1	1.0	0.9	0.7	0.7
31	0.7	0.7	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.1	0.7	0.7	0.7
* MEAN	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.8	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.2	2.5	2.9	3.2	3.2	2.9	3.2	3.1	3.2	3.0	2.7	2.6	2.0
2	2.1	2.5	2.7	3.1	3.2	3.1	3.1	3.1	3.1	3.0	2.9	2.5	1.9
3	2.0	2.6	2.9	3.0	3.0	3.1	3.2	3.2	2.9	2.9	2.9	2.5	1.8
4	...	2.4	3.0	3.0	3.1	3.2	3.0	3.1	3.1	2.8	2.7	2.7	2.2
5	2.0	2.5	2.9	2.8	3.1	3.2	3.2	3.1	3.1	3.1	2.8	2.8	...a
6	...c	...c	...c	3.0	3.4	3.1	3.1	3.1	2.9	2.9	2.8	2.8	2.9
7	...	2.4	2.7	3.1	2.9	3.1	3.0	...a	3.2	...c	...c	2.3	1.6
8	2.2	2.7	2.9	3.0	3.1	3.0	3.1	3.1	3.1	...c	3.0	2.6	2.1
9	2.1	2.6	3.0	2.9	2.9	3.0	3.0	3.1	3.1	3.1	2.9	2.8	1.9
10	2.1	2.6	2.9	3.1	3.2	3.2	3.4	3.4	3.4	3.2	3.0	2.5	1.8
11	2.0	2.5	2.8	3.1	3.2	3.3	3.4	3.4	3.3	3.2	2.9	2.4	...a
12	2.1	2.4	2.9	3.1	3.1	3.1	3.2	3.4	3.3	3.3	3.0	2.7	2.0
13	2.7	2.8	3.1	3.0	3.2	3.4	...a	...a	...a	3.1	3.1	2.6	...a
14	2.1	2.9	3.0	3.2	3.3	3.2	3.1	3.4	3.2	3.2	2.8	2.4	...a
15	2.5	...c	3.0	3.1	3.4	3.4	3.3	3.3	3.2	3.3	3.0	2.6	...a
16	2.2	2.6	2.8	3.1	3.3	3.3	3.2	3.2	3.0	3.1	2.7	2.7	2.1
17	...a	2.5	2.8	3.2	3.1	3.2	3.1	...c	...c	3.1	2.8	2.4	...a
18	2.0	2.5	2.8	3.0	3.1	3.1	3.1	3.2	3.2	3.0	3.0	2.7	...a
19	...a	2.7	2.8	3.0	3.3	3.3	3.4	3.5	3.4	3.3	3.1	2.7	2.2
20	2.1	2.0	2.8	3.2	3.2	3.3	3.2	3.2	3.2	3.3	3.0	2.6	2.1
21	2.1	2.5	2.9	3.1	3.2	3.3	3.2	3.4	3.1	3.1	2.9	2.6	...a
22	2.1	2.6	2.9	3.2	3.2	3.5	3.5	3.5	3.2	3.3	3.0	2.6	2.1
23	1.8	2.6	2.9	3.1	3.4	3.4	3.4	3.4	3.3	3.2	3.0	2.5	2.2
24	2.2	2.6	2.7	2.6	2.8	2.8	3.2	3.3	3.3	3.2	3.0	2.7	2.2
25	2.1	2.7	2.9	3.5	3.6	3.5	3.6	3.5	3.3	3.2	3.0	2.7	2.1
26	...c	...c	2.9	3.0	3.0	...c	...c	...c	3.4	3.2	3.2	2.7	2.2
27	2.1	2.6	2.8	3.2	3.3	3.2	3.2	...c	3.3	3.2	3.0	2.7	2.2
28	2.0	2.5	2.9	3.0	3.2	3.2	3.2	3.3	3.3	3.4	3.1	2.7	2.1
29	2.2	2.8	2.8	...c	...c	...c	...c	...c	3.3	3.4	3.1	2.8	2.3
30	2.1	...c	...c	3.0	...c	...c	...c	3.1	2.7	3.2	3.0	2.6	2.2
31	2.0	2.7	3.0	3.4	3.3	3.4	...c	3.3	3.3	3.0	3.0	2.7	2.2
* MEAN	2.1	2.6	2.9	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.0	2.6	2.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 271

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JANUARY 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.7	4.6	3.5	2.9	2.8	3.0	4.4	5.0	5.1	...c	...c	6.7	7.5	7.8	6.1	5.8	5.2	4.8	4.8	4.9	4.2	4.1	3.9	3.7	...
2	3.7	p4.3	4.3	4.0	2.6	3.0	3.7	3.6	4.2	4.1	4.6	5.0	5.5	5.5	4.8	5.2	5.0	5.2	5.0	4.8	4.2	3.9	3.4	p3.3	4.3
3	3.4	3.3	3.9	...f	2.4	2.8	4.1	4.2	4.2	...a	4.4	4.7	5.1	5.2	5.5	5.4	...c	...c	4.8	4.5	5.0	5.0	4.8	4.8	...
4	4.6	4.1	4.0	4.3	3.9	4.0	4.5	5.0	5.9	6.2	5.7	5.7	6.4	6.4	6.5	6.3	6.3	6.0	5.7	5.1	4.5	4.3	4.3	4.2	5.2
5	4.0	4.0	3.9	3.8	3.6	3.0	4.0	4.5	4.6	4.9	4.7	4.9	5.2	5.2	5.2	5.2	5.2	5.5	p5.3	4.9	5.0	4.8	4.1	4.2	4.6
6	4.1	4.2	3.5	3.3	3.3	3.0	3.7	4.0	4.4	4.8	...a	...a	5.1	5.7	6.5	7.0	6.5	...c	5.2	5.2	5.4	4.8	4.2	4.1	...
7	3.9	3.6	3.4	3.2	2.8	2.6	3.6	4.6	4.2	4.9	5.0	5.5	5.3	5.6	5.6	6.0	5.7	...c	6.4	5.7	5.3	4.4	4.1	4.0	...
8	3.9	3.8	...f	3.0	3.5	3.6	4.4	4.3	4.6	4.2	...a	5.0	5.4	5.5	5.9	6.2	5.8	5.8	6.2	5.9	5.5	4.7	4.2	3.8	...
9	3.1	3.0	2.8	2.9	2.9	3.0	3.9	4.7	...a	...a	5.0	5.1	5.7	6.1	6.3	5.5	5.6	5.5	5.5	6.3	5.5	4.7	4.2	3.8	...
10	3.4	3.5	3.6	3.7	2.7	2.9	4.1	4.1	4.1	4.4	...a	5.7	5.6	5.7	6.0	5.9	6.2	5.9	5.9	5.8	5.0	3.9	3.7	3.7	...
11	3.6	3.3	2.8	2.5	2.3	2.7	...c	...c	...c	6.4	5.9	6.5	6.3	6.7	6.6	6.2	5.7	6.2	6.2	6.1	4.8	4.4	3.9	4.0	...
12	4.0	3.3	2.6	2.8	2.7	2.5	3.7	4.0	4.6	...a	4.4	4.8	5.2	5.1	5.3	5.5	5.0	4.9	4.9	4.9	4.7	4.3	4.0	4.0	...
13	4.0	3.6	3.7	2.4	2.2	2.3	3.4	3.8	4.0	4.6	4.7	5.0	5.8	5.4	5.0	5.3	5.0	5.4	6.0	6.4	5.4	5.4	5.0	4.7	4.5
14	4.2	3.7	...f	...a	2.4	2.4	3.6	4.1	4.7	4.7	5.1	5.3	5.6	6.0	6.6	5.8	5.0	5.0	4.6	4.4	4.8	4.3	4.2	4.2	...
15	4.0	3.3	2.6	2.3	2.2	2.3	...a	...a	3.8	4.7	5.6	5.4	6.5	6.6	6.7	5.8	5.1	4.8	4.8	4.8	5.3	5.0	4.7	4.3	...
16	4.1	...f	2.9	...a	2.3	2.4	3.9	4.1	4.0	4.6	4.9	5.6	...a	5.9	6.4	6.3	5.2	5.2	4.9	4.3	4.6	4.3	4.6	4.3	...
17	4.3	3.3	3.3	3.0	...a	...a	...a	4.0	5.0	5.5	6.4	6.1	6.8	7.5	7.8	7.1	6.5	6.3	5.6	5.3	5.2	5.1	5.0	...a	...
18	4.1	...c	...c	...c	...c	...c	...c	...c	...c	5.2	5.7	6.1	6.2	7.2	7.2	7.2	6.2	5.9	5.7	...a	5.3	4.8	4.3	4.3	...
19	3.5	...f	2.6	2.4	2.3	2.3	3.0	3.5	...a	...a	...a	...a	4.8	5.2	...a	5.9	...a	...a	4.5	4.1	3.9	3.9	3.7	3.8	...
20	3.7	...f	3.1	...f	2.7	2.7	3.5	3.8	4.2	4.3	4.6	4.9	5.4	5.9	6.1	5.7	5.4	5.8	5.5	5.1	5.4	4.8	4.3	4.2	...
21	4.2	3.6	3.3	2.3	2.4	2.3	3.4	3.7	5.2	5.0	5.6	6.8	7.8	7.8	8.1	7.7	6.7	5.5	5.7	6.3	5.8	4.6	4.6	4.7	5.1
22	4.1	3.7	3.4	3.0	2.7	2.7	3.8	4.3	4.5	5.0	5.5	5.8	7.3	7.4	7.7	6.9	6.1	6.2	6.3	7.1	6.4	5.2	4.2	3.8	5.1
23	3.6	3.5	...a	2.9	2.7	2.5	3.5	4.4	...c	4.7	5.1	...a	...a	5.7	5.9	6.1	5.4	5.2	5.0	5.2	5.5	4.9	4.4	4.2	...
24	3.7	3.4	3.2	3.0	3.0	2.8	...c	...c	4.8	4.9	4.7	5.5	5.6	5.9	6.0	6.2	6.7	6.3	6.5	5.7	5.7	4.2	3.6	3.2	...
25	3.0	3.0	3.2	2.9	3.1	3.0	4.1	4.2	4.8	5.3	5.5	6.2	6.1	5.9	5.7	6.0	6.5	6.1	5.5	5.2	5.5	4.6	4.2	3.9	4.7
26	3.8	4.1	3.8	3.5	3.5	3.1	3.9	5.0	5.0	4.7	5.8	...a	5.7	5.7	5.8	6.0	5.9	5.5	5.1	5.6	5.9	5.0	4.0	3.8	...
27	4.1	4.0	3.2	2.8	2.6	3.1	4.1	4.0	4.2	4.3	4.5	5.1	5.3	5.4	5.5	5.6	5.6	5.5	5.3	5.0	4.0	3.9	3.7	...c	...
28	3.0	...c	...c	4.0	3.8	3.8	...c	...c	4.5	4.2	4.4	...a	...a	4.6	4.7	5.2	5.4	5.3	4.5	4.7	4.4	4.0	3.9	3.9	...
29	3.9	3.6	2.8	2.0	2.4	p2.4a	3.4	3.7	...g	4.2	4.4	4.7	5.2	5.4	5.4	5.0	5.0	4.8	4.7	4.3	4.1	3.7	3.5	3.6	...
30	3.6	4.0	3.7	3.6	3.5	3.6	4.0	5.0	5.2	5.0	5.3	5.3	5.5	5.8	5.7	6.2	6.0	p5.1a	4.8	4.7	4.3	3.6	3.6	3.6	4.6
31	3.6	3.4	3.3	3.2	2.5	2.4	4.0	4.9	5.0	5.0	5.8	5.4	6.0	6.2	6.9	6.2	5.9	5.4	5.0	4.7	5.0	4.3	4.0	3.9	4.7
MEAN*	3.9	3.7	3.3	3.1	2.8	2.8	3.8	4.2	4.6	4.8	5.1	5.5	5.8	6.0	6.1	6.0	5.7	5.5	5.4	5.2	5.0	4.5	4.1	4.0	4.6

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 272

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1944

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...d	...d	...d	...d	...d	...d	...d	...d	...d	...d	...d	370	325	290	310	350	320	350	210	220	...a	250	275	290	...
2	...a	...a	280	230	...a	...a	...a	235	...a	...	...a	460	380	350	500	370	...a	330	230	250	215	280	260	p270	...
3	...a	270	250	230	300	270	240	220	...	...a	...	...	425	370	370	340	...c	...c	235	250	...a	265	270	260	...
4	230	240	240	...a	240	250	220	355	320	280	350	400	360	340	320	320	310	310	270	...a	...a	250	265	280	...
5	...a	300	230	...c	...c	...c	...c	190	370	350	...	450	480	440	380	370	350	300	p290	220	...a	...a	260	260	...
6	...a	250	280	250	240	235	...a	...	...	390	...a	...a	...a	400	330	295	...a	...c	270	240	230	...a	250	280	...
7	270	250	...a	275	275	260	335	260	...	400	415	355	370	350	350	325	340	...c	280	...a	225	260	260	265	...
8	270	230	...f	280	...a	265	220	220	330	...	...a	440	395	395	345	305	320	300	220	230	240	240	270	260	...
9	240	260	250	...a	230	240	250	300	...a	...a	410	...	360	335	320	340	310	310	220	230	230	280	250	280	...
10	290	280	...a	240	p280	260	230	350	235	...	...a	330	365	380	320	340	305	285	220	230	200	240	...a	280	...
11	270	...a	...a	270	270	250	...c	...c	...c	290	350	360	330	330	345	340	390	310	230	215	...a	230	...a	...a	...
12	...a	260	290	280	270	290	250	230	...a	...a	...	470	420	410	385	330	380	350	320	230	230	295	...a	300	...
13	...f	270	...a	210	...a	...f	p270	...	...	475	490	460	350	350	420	380	390	345	295	...a	260	290	270	260	...
14	280	260	...f	...a	...f	270	210	220	390	450	400	440	400	370	320	320	350	310	230	250	250	270	270	290	...
15	270	250	290	...a	300	270	...a	...a	220	...	350	440	350	340	320	310	320	...c	240	270	275	330	260	270	...
16	280	...f	...f	...a	...f	...f	240	230	...	480	...a	...a	...a	350	320	285	345	360	250	270	255	270	290	290	...
17	260	300	...f	...a	...a	...a	...a	300	230	370	315	370	335	300	290	320	290	280	225	235	265	270	265	...a	...
18	...f	...c	...c	...c	...c	...c	...c	...c	...c	370	365	350	390	330	300	300	320	295	290	...a	270	...f	270	...f	...
19	260	...f	280	270	270	270	230	...a	...a	...a	...a	...a	...	400	...a	315	...a	...a	215	235	...a	280	...f	300	...
20	...a	...a	...a	...f	...f	225	215	210	...a	...	...	480	315	365	330	340	365	300	220	250	250	235	290	260	...
21	260	240	240	260	250	260	220	220	330	...	...	...a	310	320	295	290	270	290	300	240	225	...a	295	275	...
22	260	220	260	250	260	260	220	200	...	...	350	330	310	305	300	300	315	295	210	235	225	220	270	270	...
23	250	230	...a	...a	280	270	240	350	...c	...	420	...a	...a	330	350	330	350	310	230	250	250	...a	250	265	...
24	240	250	250	290	p290	270	...c	...c	320	380	...	380	395	350	335	330	290	290	190	215	240	...a	240	260	...
25	...f	270	260	240	220	200	230	220	200	350	360	320	345	340	360	320	300	280	230	240	220	245	250	...a	...
26	...a	...a	240	220	240	230	250	280	300	...	340	...a	385	360	345	320	300	300	220	...a	230	220	245	290	...
27	250	...a	...a	265	...a	...f	250	...	370	230	...	...	...c	420	390	315	315	310	245	...a	...a	260	...a	...c	...
28	...c	...c	...c	...c	...c	...c	...c	...c	380	440	...	...a	...a	...	490	370	335	310	220	240	240	260	260	280	...
29	235	230	210	250	...a	...a	220	...a	...	...	...	...	430	375	360	425	350	340	225	250	225	240	240	270	...
30	300	...a	...a	240	230	225	240	220	290	410	380	370	365	370	370	300	280	...a	230	235	220	245	260	300	...
31	...a	280	...a	230	250	250	240	240	350	385	...a	415	350	345	295	300	300	295	235	240	230	...a	250	...a	...
MEAN*	262	257	257	252	261	253	239	252	309	378	378	402	370	359	349	329	326	310	242	239	238	259	263	276	294

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 273

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.0	...c	...c	4.4	4.3	4.3	4.4	4.2	4.1	3.9	...
2	...	...	...	4.0	...a	...a	4.3	...a	4.3	4.2	...a	3.8	...
3	...	...	4.0	...a	4.3	4.2	4.4	4.4	4.3	4.2	...c	...c	...
4	...	4.0	4.1	4.3	...a	...a	...a	...a	...a	...a	4.0	3.8	...
5	...	...	4.1	4.2	4.3	4.2	4.3	4.2	4.3	4.1	4.0	3.7	...
6	...	3.7	4.0	4.1	...a	...a	...a	...a	4.3	4.2	...a	...c	...
7	...	3.5	3.9	4.1	4.2	4.2	4.3	4.2	4.2	4.1	4.1	...c	...
8	...	...	3.9	4.1	...a	4.3	4.2	4.4	4.2	4.2	4.1	3.7	...
9	...	3.7	...a	...a	4.2	4.3	4.3	4.3	4.2	4.3	4.0	3.9	...
10	...	...	...	4.1	...a	4.3	4.3	4.4	4.5	4.2	...a	3.7	...
11	...	...	...	4.2	4.2	4.3	4.3	4.3	4.3	4.2	4.2	3.7	...
12	...	...	...a	...a	4.1	4.2	4.2	4.1	4.2	4.0	4.0	3.7	...
13	...	3.5	3.7	4.0	4.2	4.2	4.2	4.2	4.2	4.2	4.1	3.8	...
14	...	...	4.0	4.0	4.3	4.3	4.3	4.3	4.2	4.2	4.0	3.8	...
15	...	...	...	4.2	4.2	4.3	4.3	4.3	4.2	4.2	4.0	...c	...
16	...	...	3.7	4.0	...a	...a	...a	4.4	4.2	4.2	3.9	3.8	...
17	...	...	...	4.1	4.3	4.4	4.3	4.3	4.4	4.2	4.1	3.8	...
18	...	...	...	4.2	4.2	4.3	4.4	4.4	4.3	4.3	4.0	3.8	...
19	...	...	...	...a	...a	...a	4.3	4.2	...a	4.1	...a	...a	...
20	...	...	4.0	4.0	4.2	4.2	4.4	4.3	4.2	4.2	4.0	3.8	...
21	...	...	...	3.8	4.0	...a	4.3	4.4	...a	4.3	4.1	3.8	...
22	...	...	4.1	4.3	4.3	4.4	4.4	4.4	4.4	4.3	4.2	3.9	...
23	...	3.6	...c	4.2	4.3	...a	...a	4.3	4.2	4.2	4.1	3.8	...
24	...	...	4.0	4.2	4.3	4.2	4.4	4.4	4.4	4.3	4.1	3.9	...
25	...	...	...	4.1	4.3	4.3	4.4	4.4	4.3	4.2	4.1	3.8	...
26	...	3.7	4.0	4.2	4.3	...a	4.4	4.5	4.3	4.3	4.2	3.9	...
27	...	3.5	3.8	...	4.2	4.2	4.2	4.3	4.2	4.2	4.0	3.9	...
28	...	...	3.8	3.9	4.1	...a	...a	4.2	4.2	4.1	4.0	3.8	...
29	...	...	p4.0c	3.9	4.1	4.3	4.3	4.3	4.2	4.1	4.0	3.8	...
30	...	...	4.0	4.1	4.2	4.3	4.3	4.4	4.3	4.2	4.0	...a	...
31	...	...	4.0	4.1	...a	.•.a	...a	4.3	4.3	4.2	4.0	3.8	...
* MEAN	...	3.6	4.0	4.1	4.2	4.3	4.3	4.3	4.3	4.2	4.0	3.8	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...c	...c	...c	205	...a	...a	...c	250	230	210	...
2	...	...	...	250	...a	...e	230	...a	200	...a	...a	230	...
3	...	...	...a	...a	...c	200	190	200	...c	210	...c	...c	...
4	...	240	215	245	...a	...a	...a	...a	...a	...a	...a	...a	...
5	...	...	220	190	220	210	...h	...c	...a	...a	240	240	...
6	...	255	230	220	...a	...a	...a	...a	...a	225	...a	...c	...
7	...	230	200	235	250	...h	...a	...a	...a	220	225	...c	...
8	...	...	240	230	...a	...a	...a	...a	...a	...a	...a	...a	...
9	...	220	...a	...a	...a	...a	230	...	225	...a	...a	230	...
10	...	...	...	...a	...a	220	...	...	...a	...a	...a	...a	...
11	...	...	...	...	...	...	...	...	...	225	230	250	...
12	...	...	...a	...a	230	...	...a	195	...	220	240	220	...
13	...	230	...h	215	...	...	200	...a	230	...a	...a	260	...
14	...	...	240	...	225	...a	225	190	210	230	230	220	...
15	...	...	...	270	250	230	...a	210	220	220	225	...c	...
16	...	...	220	235	...a	...a	...a	220	200	210	220	255	...
17	...	...	...	...a	...a	235	205	...a	...a	...a	220	210	...
18	...	...	...	250	225	...a	230	210	210	255	210	...a	...
19	...	...	...	...a	...a	...a	190	...a	...a	...a	...a	...a	...
20	...	...	220	220	...a	...a	...a	...a	...a	190	230	220	...
21	...	...	...	...h	...h	...a	...a	240	...a	...h	...h	210	...
22	...	...	195	210	...	230	200	220	210	...a	225	...a	...
23	...	200	...c	...h	200	...a	...a	160	190	180	230	240	...
24	...	...	220	200	160	190	210	190	200	210	210	...a	...
25	...	...	...	190	190	190	180	240	240	200	220	220	...
26	...	230	220	215	200	...a	200	170	...a	215	245	220	...
27	...	220	225	...	220	200	200	215	...a	...a	220	...h	...
28	...	...	230	210	200	...a	...a	195	200	200	220	220	...
29	...	...	...a	200	...a	220	205	200	...a	200	230	220	...
30	...	...	210	220	205	210	230	...a	...a	...a	...a	...a	...
31	...	...	...a	...a	...a	...a	...a	210	210	235	235	220	...
* MEAN	...	228	220	222	215	212	208	205	211	216	227	228	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 274

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1944 — JANUARY 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	0.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
2	...c	...c	...c	0.8	0.8	1.0	0.8	1.0	0.8	0.8	0.7	0.7	...e
3	0.7	0.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
4	...c	...c	...c	0.8	0.8	0.9	0.8	1.0	0.9	0.7	0.7	0.6	0.6
5	...	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
6	...e	0.7	0.7	0.8	1.0	...c	...c	...c	...c	0.8	0.7	...c	...c
7	...c	...c	...c	...c	...c	...c	...c	...c	...c	0.8	0.8	...c	0.6
8	...e	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...e
9	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	...e	...e
10	...e	...e	...e	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
11	...c	...c	...c	0.7	0.7	0.7	0.9	0.9	0.9	0.7	...e	...e	...e
12	...e	...e	...e	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7
13	...e	0.7	...e	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.8	...e	...e
14	...e	0.8	1.1	0.9	1.0	0.9	0.9	1.0	1.0	0.8	0.8	...e	...e
15	...e	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	...c	...e
16	...e	...e	...e	0.7	0.7	0.9	0.8	0.9	0.9	0.9	0.8	0.7	...e
17	...e	0.7	0.7	0.9	0.9	0.9	0.9	0.9	1.1	0.7	0.7	...e	...e
18	...c	...c	...c	0.7	0.7	0.7	0.6	0.7	0.6	...e	...e	...e	0.7
19	...e	...e	...e	...e	...e	0.7	0.7	0.8	0.9	0.8	0.8	0.7	...e
20	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.7	0.7
21	...e	...e	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...e
22	...e	...e	...e	...e	0.7	...e	...e	0.7	0.8	0.9	0.9	0.7	...e
23	...e	0.7	...c	0.9	0.9	0.9	0.8	0.9	0.9	0.8	...e	...e	...e
24	...c	...c	0.9	...e	0.7	0.7	0.7	0.9	0.7	...e	...e	...e	...e
25	...e	...e	...e	0.8	0.9	0.9	1.0	1.0	0.9	0.9	0.7	...e	...e
26	...e	...e	...e	...e	0.8	0.8	0.7	0.7	...e	...e	...e	...e	...e
27	...e	...e	...e	0.9	0.7	0.6	0.7	0.7	0.7	...e	0.7	...e	...e
28	...c	...c	0.7	...e	0.7	1.0	...c	0.7	0.7	0.7	0.6	0.6	...e
29	...e	0.6	0.7	0.6	0.8	0.8	0.7	0.9	0.8	0.6	0.7	0.6	...e
30	...e	0.5	0.8	0.8	0.7	0.7	0.7	0.9	0.8	0.7	0.7	0.6	0.7
31	...e	0.7	0.7	0.8	0.9	0.9	0.9	1.0	0.9	0.8	0.7	...e	...e
* MEAN	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.7	0.6	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.1	2.6	2.8	...c	...c	...c	...c	3.3	3.4	3.3	3.0	2.7	1.9
2	...a	2.5	...a	2.8	3.1	2.9	...a	3.2	3.0	2.9	2.7	2.6	1.9
3	1.9	2.5	2.7	3.0	...c	3.2	...c	3.2	3.0	3.1	...c	...c	2.2
4	2.0	2.6	2.9	3.1	3.4	3.4	...c	3.3	3.2	3.0	2.7	2.2	...a
5	...	2.3	2.8	3.1	...c	...c	...c	...c	3.3	3.1	2.8	2.6	...a
6	1.8	2.5	2.9	3.0	3.2	...c	...c	3.3	...c	3.0	2.6	...c	...a
7	1.5	2.2	2.7	3.0	3.3	3.3	3.4	...a	...c	...a	2.7	...c	...a
8	1.7	2.5	2.8	3.0	3.2	3.2	3.3	3.3	3.1	3.2	2.9	...a	2.3
9	...	...a	...a	2.9	3.0	3.1	3.1	3.2	3.0	3.2	2.9	2.6	2.1
10	1.9	2.4	2.8	3.0	3.1	3.2	...c	3.1	3.3	3.2	3.0	2.5	2.0
11	...c	...c	...c	2.8	2.9h	3.2	3.3	3.3	3.4	3.2	3.0	2.7	2.1
12	2.0	2.4	2.8	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.7	2.1
13	2.1	2.4	3.0	3.0	3.1	3.2	3.2	3.2	3.2	3.0	2.6	2.6	2.1
14	2.0	2.5	2.7	3.1	3.0	...a	...a	3.2	...a	3.1	2.9	2.7	2.1
15	...a	2.9	...a	2.8	2.8	2.9	...a	...a	3.2	...a	3.0	...c	2.1
16	1.7	2.3	2.7	3.2	3.2	3.3	3.3	3.2	3.1	3.2	3.2	2.6	2.2
17	...a	2.4	2.8	3.0	3.2	3.2	3.2	3.3	3.2	2.9	3.0	2.7	2.2
18	...c	...c	...c	3.0	3.2	3.2	3.2	3.2	3.2	3.1	3.0	...a	2.8
19	1.9	...a	...a	2.7	...a	...a	3.0	3.2	...a	...a	3.0	3.2	...a
20	1.9	2.4	2.9	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.6	2.1
21	1.6	2.4	2.9	3.1	3.2	3.2	3.1	3.1	3.1	3.1	3.0	2.7	2.2
22	2.0	2.5	2.9	3.0	3.2	3.2	3.1	3.1	3.2	3.2	3.1	2.7	2.2
23	2.1	2.5	...c	3.2	3.1	3.3	3.5	3.0	3.3	3.3	3.1	2.7	2.1
24	2.0	2.5	2.9	3.0	3.1	3.1	3.2	3.2	3.2	3.2	3.1	...a	2.2
25	1.7	2.3	2.7	3.1	3.2	3.2	3.1	3.0	...a	3.2	3.0	2.7	2.2
26	...	2.4	2.7	3.0	3.1	3.0	3.2	3.2	3.2	3.0	...a	2.6	2.1
27	1.9	2.3	2.8	3.0	3.0	3.2	3.2	3.2	3.2	3.1	2.9	2.7	2.3
28	...c	...c	2.7	2.8	3.0	...a	3.1	3.2	3.1	3.3	2.9	2.6	2.1
29	...a	...a	...a	3.0	3.2	3.3	3.3	3.3	...a	3.2	2.9	2.5	2.0
30	1.8	2.3	2.9	3.0	3.3	...a	3.3	3.3	3.3	3.2	3.0	...a	2.1
31	1.8	2.4	2.9	3.2	3.1	3.1	...a	3.2	3.3	3.2	3.0	2.6	2.1
* MEAN	1.9	2.4	2.8	3.0	3.1	3.2	3.2	3.2	3.2	3.1	2.9	2.6	2.2

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 275

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — FEBRUARY 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.7	3.6	3.7	3.4	3.4	3.3	4.1	5.0	...g	4.7	5.7	5.6	5.7	5.8	5.9	5.8	5.8	5.4	5.2	...a	4.1	3.9	3.9	4.2	...
2	4.1	...f	3.1	3.0	...f	2.8	3.7	4.2	4.3	4.9	5.1	5.3	5.5	5.9	6.3	6.8	6.4	5.6	5.1	4.7	4.7	4.7	4.5	4.0	...
3	3.6	3.4	3.8	3.7	3.4	3.3	3.9	4.6	4.9	5.4	5.3	5.5	...a	...a	6.7	6.8	6.6	5.9	6.3	5.1	4.5	4.0	3.5	3.2	...
4	3.1	3.2	2.8	...f	...f	2.7	3.6	5.1	5.3	5.4	5.9	5.6	...c	5.7	6.0	6.4	6.8	6.5	5.6	4.8	p4.9	4.5	3.9	3.7	...
5	3.7	3.6	3.1	3.0	2.4	2.6	3.8	5.0	5.0	5.0	5.5	5.9	6.4	6.7	6.5	6.9	7.4	6.9	5.7	5.0	4.2	3.9	3.5	3.3	4.8
6	3.2	3.1	2.9	2.9	2.7	2.6	3.6	4.8	5.5	4.8	5.2	5.3	5.3	6.1	6.2	5.5	5.3	5.1	4.8	4.4	3.7	3.0	3.1	3.5	4.3
7	3.6	3.7	3.5	3.0	2.9	3.1	3.7	4.5	4.8	p5.0	5.3	5.5	...c	5.8	6.2	6.6	7.2	8.1	7.3	7.3	6.0	6.6	6.1	5.8	...
8	5.1	5.0	3.3	2.3	1.7	2.0	3.1	3.7	3.9	4.4	4.4	4.5	5.0	4.7	4.6	5.0	4.5	4.7	4.6	4.9	4.6	3.5	2.7	2.9	4.0
9	3.2	3.5	...f	1.7	1.6	1.7	3.5	4.5	4.5	5.1	p5.2	4.7	5.0	6.2	6.3	5.9	5.5	4.9	4.9	5.0	4.4	3.8	3.5	3.4	...
10	3.3	2.9	2.1	...f	2.1	2.2	3.0	3.7	4.2	4.4	4.6	5.2	5.8	5.9	6.1	6.0	5.4	5.2	4.8	4.6	4.9	3.3	3.3	3.3	...
11	3.4	3.1	2.3	2.7	2.6	2.5	3.3	p3.9	4.2	4.7	5.0	5.2	5.4	5.4	5.4	5.8	5.4	4.8	4.5	4.2	4.7	4.2	...f	4.2	...
12	4.0	3.5	2.6	2.5	2.3	2.4	3.1	4.1	4.6	5.2	...a	5.4	5.0	5.9	6.4	6.3	5.8	5.9	5.4	5.7	5.5	4.9	4.5	4.5	...
13	4.5	4.4	2.7	1.9	2.0	2.0	3.2	4.2	4.6	4.8	5.1	5.8	5.3	5.7	5.3	5.0	4.7	4.6	4.6	4.8	4.5	p4.0	p3.6	3.8	4.2
14	3.7	3.6	3.3	2.8	2.3	2.5	3.7	4.1	4.4	4.6	4.8	4.8	5.9	7.1	6.7	6.5	6.0	5.1	5.3	6.3	5.2	4.8	4.2	4.0	4.6
15	4.1	3.6	3.2	2.7	2.7	2.7	3.0	3.7	4.2	4.8	5.5	5.5	5.6	p5.9	6.5	6.5	5.8	5.3	5.3	5.8	5.5	4.6	3.9	...a	...
16	3.9	3.7	p2.9	p2.9	2.6	2.7	3.7	4.4	4.9	5.0	5.2	p5.5	...a	6.2	6.5	6.5	6.6	6.2	5.6	5.6	4.8	3.3	2.7	2.7	...
17	2.7	2.8	2.9	2.9	2.6	2.6	3.6	4.5	4.9	5.2	...c	...c	...c	...c	...c	...c	7.1	6.2	6.0	6.2	6.3	5.1	3.9	3.7	...
18	3.5	3.6	3.5	3.4	3.3	3.0	3.8	4.1	4.5	5.0	5.3	5.2	5.8	6.7	7.2	6.7	6.4	6.2	5.6	5.2	4.7	4.1	3.6	3.3	4.7
19	3.2	3.3	3.3	2.7	2.6	2.7	3.5	4.4	5.0	5.6	6.0	5.5	5.8	5.5	6.3	7.0	6.7	6.1	6.0	5.7	5.9	4.2	3.3	3.2	4.7
20	3.5	3.6	3.3	3.3	3.2	3.1	3.5	4.6	4.8	4.9	5.2	5.2	5.6	6.3	6.4	7.0	6.0	5.6	5.8	6.0	5.8	4.6	4.5	4.2	4.8
21	3.9	3.9	2.8	2.7	2.6	2.3	2.6	3.6	4.3	4.4	4.8	4.9	5.1	4.9	4.8	...c	5.2	5.2	4.9	5.5	5.1	3.8	3.2	3.4	...
22	...a	3.5	...c	...c	2.6	2.3	...c	...c	4.4	4.6	5.2	5.7	6.1	6.9	7.0	6.2	6.5	6.0	5.2	4.7	4.2	3.6	3.7	4.2	...
23	4.1	...f	...f	3.8	3.3	3.1	3.8	4.6	5.1	5.5	5.8	6.0	6.4	6.4	6.8	6.8	6.1	p5.8	...c	5.5	4.9	3.7	3.6	3.5	...
24	3.6	p3.5	3.2	...c	...c	...c	...c	...c	4.3	4.7	4.9	...c	5.5	6.1	6.4	6.3	5.5	5.1	5.0	4.5	4.3	3.8	3.3	3.6	...
25	3.6	3.5	3.7	3.7	3.5	3.5	3.9	5.0	5.2	5.8	6.3	6.3	7.4	7.4	7.7	6.9	6.0	5.6	5.2	4.9	4.6	4.3	4.2	4.1	5.1
26	4.0	3.9	3.7	3.5	3.2	2.4	3.4	4.3	4.7	5.2	6.0	7.4	7.2	7.6	7.8	7.0	6.5	5.8	5.6	5.1	4.3	3.8	3.6	3.4	5.0
27	3.2	3.2	3.2	3.0	3.3	2.8	3.6	4.2	4.8	5.4	6.0	6.0	6.5	6.3	6.5	6.2	6.1	6.0	5.7	4.7	4.1	3.8	3.7	3.4	4.6
28	3.3	3.3	3.1	3.0	2.8	3.0	3.6	4.6	4.9	5.4	5.7	6.3	7.3	7.8	6.8	7.0	6.6	6.2	5.2	4.8	4.4	3.7	3.6	3.7	4.8
29	3.5	3.4	3.4	3.6	4.0	4.0	4.0	4.9	4.8	5.2	5.2	5.2	6.3	7.0	6.8	6.8	p6.7	6.8	6.3	5.3	4.9	3.8	3.7	3.7	5.0
30																									
31																									
MEAN*	3.6	3.5	3.1	3.0	2.8	2.7	3.5	4.4	4.7	5.0	5.3	5.5	5.9	6.2	6.4	6.4	6.1	5.8	5.4	5.2	4.8	4.1	3.7	3.7	4.6

* = ALL TABULATED VALUES　a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E　b = LOSS OF RECORD DUE TO ABSORPTION　c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER　e = BELOW LOWER LIMIT OF RECORDER　f = SPREAD ECHOES PRESENT　g = f^0F2 EQUAL TO OR LESS THAN f^0F1　h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY　k = IONOSPHERIC STORM IN PROGRESS　p = INTERPOLATED VALUE　q = DOUBTFUL VALUE

TABLE 276

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1944 · MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS FEBRUARY 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	245	265	250	280	260	265	230	225	...	...	345	350	365	370	335	320	300	...a	...a	...a	...a	...a	255	...a	...
2	...a	270	...a	255	220	...a	245	220	...	390	350	380	350	370	315	305	...a	290	290	...a	...a	...a	...a	240	...
3	235	265	265	...a	240	260	...a	240	330	315	370	390	...a	...a	325	300	280	295	...a	215	230	240	240	...a	...
4	270	...a	220	...a	...a	...a	250	265	280	315	300	325	...c	330	350	325	295	270	270	...a	...a	...a	250	280	...
5	260	230	240	230	220	240	230	220	260	...	350	345	335	300	320	300	280	250	215	210	225	230	250	250	...
6	260	240	250	225	250	...a	210	310	250	410	350	450	380	320	300	330	...a	285	210	225	240	250	270	...a	...
7	...a	270	...a	...a	230	250	...a	210	340	p395	350	340	...c	365	335	325	320	270	220	240	...a	260	280	240	...
8	255	230	210	245	320	300	265	...	...	490	...	...	390	455	...	365	420	350	230	240	230	250	...a	...a	...
9	...a	240	210	...a	300	...a	250	p240	390	340	p330	...	480	350	310	325	330	330	240	235	215	230	270	...a	...
10	...a	...a	...a	...f	280	280	270	...	440	...	485	400	355	350	340	300	320	290	235	230	240	275	270	290	...
11	250	...a	...a	260	...a	...a	...a	...a	460	390	400	410	380	390	360	315	300	310	225	245	250	...a	...a	275	...
12	270	250	...a	265	280	280	265	340	340	340	...a	335	...	370	325	320	310	290	...a	240	...a	260	260	270	...
13	240	200	205	...f	270	270	260	220	350	365	390	330	425	335	350	380	410	355	230	235	210	p240	285	...f	...
14	...a	230	230	...a	250	240	220	210	390	425	430	...c	440	350	350	350	320	330	335	240	240	240	290	260	...
15	...a	235	225	230	250	260	270	250	380	355	300	380	350	p380	320	290	300	320	...a	240	...a	240	250	...a	...
16	...a	...a	...a	...a	270	...a	240	205	280	350	380	p390	...a	350	325	320	310	275	255	235	200	230	260	265	...
17	300	300	270	240	240	230	215	210	320	340	...c	...c	...c	...c	...c	...c	270	275	210	230	220	210	225	270	...
18	280	270	270	260	250	270	225	200	280	325	340	410	350	310	300	290	285	280	235	235	230	235	250	250	276
19	290	260	230	235	240	250	240	p295	325	300	285	300	330	375	320	285	290	275	250	230	230	...a	265	260	...
20	245	260	240	280	250	260	250	310	330	335	345	395	370	285	310	275	285	280	270	230	205	250	250	290	283
21	280	270	...a	...a	290	300	255	235	350	450	470	365	350	400	...	...c	350	330	240	...a	...a	...a	...a	...a	...
22	...a	...a	...c	...c	...c	...c	...c	...c	400	410	370	355	350	310	295	310	280	260	225	225	215	...a	...a	...a	...
23	260	...f	...a	210	230	280	240	240	295	300	300	330	300	315	300	280	290	p280	...c	...a	215	240	260	260	...
24	250	...a	...a	...c	...c	...c	...c	...c	200	435	440	...c	380	325	300	290	300	290	230	225	...a	...a	...a	265	...
25	255	250	250	275	...a	245	240	250	245	310	305	345	300	290	290	270	290	260	230	230	240	250	275	270	...
26	280	245	240	230	225	215	230	230	350	345	330	280	310	290	295	280	280	265	...a	220	210	240	240	250	...
27	250	240	210	220	...a	240	240	210	325	325	295	325	300	320	305	305	275	265	230	205	240	230	240	240	...
28	240	220	220	205	215	240	...a	230	300	330	320	335	300	270	295	280	270	260	225	...a	230	250	250	250	...
29	230	240	240	235	215	235	230	230	320	320	350	400	330	300	300	300	280	270	230	220	230	220	240	260	268
30																									
31																									
MEAN*	259	249	236	243	252	258	242	241	328	362	357	361	357	340	318	309	305	289	240	230	226	241	258	262	282

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 277

FEBRUARY 1944 | FEBRUARY 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.2	4.1	4.2	4.3	4.3	4.3	...a	...a	...a	...a	...
2	...	...	4.1	4.1	4.3	4.3	4.4	4.4	4.3	...a	...a	...a	...
3	...	...	3.9	4.1	4.2	...a	...a	...a	...a	4.2	4.0	...a	...
4	...	3.6	3.9	4.1	4.3	4.4	...c	4.3	4.3	4.1	4.0	3.7	...
5	...	...	3.9	4.4	4.2	4.3	4.3	4.3	4.2	4.0	4.0	3.8	...
6	...	3.6	3.9	4.3	4.2	4.3	4.3	...a	4.2	4.2	...a	3.7	...
7	...	...	3.9	p4.1	4.2	4.2	...c	4.3	4.2	4.1	3.9	3.8	...
8	...	3.3	3.6	3.8	4.0	4.0	4.1	4.1	4.0	4.0	3.8	3.6	...
9	...	...	3.8	4.0	p4.2	4.3	4.2	4.1	4.2	4.1	4.0	3.7	...
10	...	3.4	3.7	3.9	4.1	4.1	4.2	4.2	4.2	4.0	3.9	3.7	...
11	...	...	3.7	4.0	4.0	4.2	4.2	4.2	4.2	4.0	3.9	3.7	...
12	...	3.4	...a	...a	...a	...a	4.2	4.3	4.2	4.1	4.1	...a	...
13	...	...	3.6	3.9	...a	4.2	4.3	4.2	4.1	4.1	4.0	3.7	...
14	...	...	3.9	3.9	4.0	4.2	4.1	4.1	4.0	4.0	3.9	3.8	...
15	...	...	3.7	4.0	4.3	4.4	...a	p4.4	4.3	4.1	4.0	3.8	...
16	...	...	3.8	4.2	4.3	...a	...a	...a	4.3	4.2	...a	3.7	...
17	...	...	3.9	4.2	...c	...c	...c	...c	...c	...c	4.1	3.8	...
18	...	...	3.5	4.2	4.3	4.3	4.4	4.3	4.4	4.2	4.0	3.7	...
19	...	...	...	4.2	4.2	4.2	4.3	4.3	4.4	4.2	4.1	3.7	...
20	...	...	3.8	4.2	4.2	4.3	4.4	4.3	4.3	4.3	4.0	3.7	...
21	...	...	3.7	4.0	4.1	4.2	4.2	4.3	4.3	...c	4.0	3.7	...
22	...	...	3.8	4.0	4.2	4.3	4.4	4.3	4.3	4.2	4.0	3.6	...
23	...	...	4.0	4.2	4.3	4.3	4.4	4.4	4.3	4.2	4.0	p3.8	...
24	...	...	...	4.1	4.2	...c	4.3	4.3	4.2	4.2	3.9	3.7	...
25	...	...	...	4.3	4.2	4.3	4.3	4.3	4.2	4.2	4.0	3.7	...
26	...	...	3.9	4.1	4.2	4.2	4.4	4.4	4.3	4.2	4.1	3.6	...
27	...	...	3.8	4.1	4.2	4.3	4.3	4.4	4.3	4.2	4.0	3.6	...
28	...	...	3.9	4.1	4.2	4.3	4.3	4.3	4.2	4.1	3.9	3.6	...
29	...	...	4.0	4.1	4.2	4.3	4.3	4.2	4.3	4.1	p4.0	3.5	...
30													
31													
MEAN*	...	3.5	3.8	4.1	4.2	4.3	4.3	4.3	4.7	4.1	4.0	3.7	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	220	220	225	220	220	...a	...a	...a	...a	...a	...
2	...	...	240	220	250	210	...	...a	215	...a	...a	...a	...
3	...	...	225	225	...a	...a	...a	...a	...a	...a	225	...a	...
4	...	230	200	225	255	210	...c	190	185	280	...a	210	...
5	...	...	220	215	200	220	210	...a	220	...a	...a	...a	...
6	...	200	235	220	215	220	...a	...a	...a	...a	...a	210	...
7	...	...	...a	p210	200	...a	...c	...a	235	...a	215	245	...
8	...	230	250	230	...	...a	250	245	255	230	240	240	...
9	...	...	245	220	p190	200	...a	...a	...a	215	220	220	...
10	...	225	230	225	230	200	205	210	230	200	215	220	...
11	...	...	240	215	...a	...a	...a	255	230	220	220	225	...
12	...	230	...a	...a	...a	...a	220	200	225	...a	...a	...a	...
13	...	...	325	220	...a	...a	...a	...a	...a	225	205	225	...
14	...	...	240	220	200	200	...h	270	235	240	215	230	...
15	...	...	245	230	...a	...a	...a	...a	210	...a	230	235	...
16	...	...	230	220	220	...a	...a	...a	...a	...a	...a	235	...
17	...	...	245	210	...c	...c	...c	...c	...c	...c	230	210	...
18	...	...	200	...	195	180	...a	200	250	210	225	225	...
19	...	...	...	210	215	190	180	220	195	200	210	275	...
20	...	...	215	255	215	200	200	...	...a	...a	240	225	...
21	...	...	235	195	190	190	200	175	180	...c	240	235	...
22	...	...	230	225	210	200	190	250	200	240	...a	215	...
23	...	...	230	230	220	200	190	170	...a	...a	210	p240	...
24	...	...	...	...a	215	...c	...a	...a	195	190	210	255	...
25	...	...	...	...a	...a	200	215	215	...a	...a	...a	240	...
26	...	...	240	235	220	215	200	190	185	...h	235	220	...
27	...	...	200	210	200	190	185	170	200	235	...c	225	...
28	...	...	200	220	215	210	200	210	215	215	...	220	...
29	...	...	230	235	215	210	190	200	250	210	p235	220	...
30													
31													
MEAN*	...	223	232	222	214	203	204	211	216	222	223	229	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 278

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1944 FEBRUARY 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.7	...e	...e	0.8	0.7	0.8	0.8	0.8	0.7	...e	...e	...e
2	...e	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.7
3	...e	...e	...e	0.6	0.9	0.9	0.7	1.0	0.7	...e	...e	...e	...e
4	...e	0.6	0.9	0.9	0.9	0.9	...c	0.7	0.9	0.8	0.9	0.7	...e
5	...e	...e	...e	...e	0.7	0.9	0.9	0.9	0.9	...e	...e	...e	...e
6	...e	...e	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.8	...e	...e	...e
7	...e	...e	0.7	p1.0	0.8	0.7	...c	0.7	0.8	...e	...e	...e	...e
8	...e	...e	...e	...e	...e	0.8	0.7	0.7	...e	...e	...e	...e	...e
9	...e	...e	...e	...e	...e	...e	0.7	0.7	0.7	0.7	...e	...e	...e
10	...e	...e	...e	...e	0.7	0.8	0.7	0.9	...e	0.7	...e	...e	...e
11	...e	...e	...e	...e	0.7	0.9	0.9	0.8	0.9	0.7	...e	...e	...e
12	...e	...e	...e	0.7	0.8	0.9	0.8	0.9	0.9	0.7	0.7	...e	...e
13	...e	0.6	0.7	0.8	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	...e
14	...e	...e	0.7	0.7	0.9	1.0	1.0	0.8	0.8	0.8	0.8	...e	...e
15	...e	...e	0.7	0.9	0.8	0.8	0.9	0.8	0.8	0.8	...e	...e	...e
16	...e	...e	...e	...e	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.5
17	...e	...e	0.5	0.9	...D	...c	...c	...c	...c	...c	0.7	...e	...e
18	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	...e
19	...e	...e	0.7	0.7	0.7	...e	...e	0.7	0.6	0.8	...e	...e	...e
20	...e	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...e	...e	...e
21	...e	...e	...e	...e	1.0	0.9	0.9	0.7	1.0	...o	1.0	...e	...e
22	...c	...c	...e	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	...e	...e
23	...e	...e	...e	0.9	1.0	0.9	0.9	1.0	1.0	1.0	0.7	...e	...c
24	...c	...c	...e	0.7	1.0	...c	0.9	1.0	0.9	...e	...e	...e	...e
25	...e	0.6	1.0	0.6	0.6	0.8	0.9	1.0	0.8	1.0	0.6	0.6	...e
26	...e	...e	...e	0.6	...e	...e	1.0	0.9	0.9	0.9	0.7	...e	...e
27	...e	...e	...e	...e	0.8	0.8	0.9	1.0	1.0	0.9	0.7	...e	...e
28	...e	...e	1.0	0.9	0.9	1.0	1.0	1.0	1.0	...e	0.6	...e	...e
29	...e	...e	...e	0.6	0.6	1.0	1.0	1.0	1.0	0.7	p0.6	0.6	...e
30													
31													
* MEAN	0.5	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.6	0.6	0.5

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.7	2.3	2.9	3.0	3.0	3.1	3.2	3.2	3.2	3.2	2.9	2.5	2.0
2	2.1	2.3	2.7	3.0	3.1	3.1	3.2	3.2	3.2	3.1	2.9	2.5	1.9
3	...a	2.5	...h	2.4	3.2	3.2	3.2	3.2	3.2	3.0	2.8	2.4	2.0
4	2.1	2.5	2.7	3.0	3.1	2.9	...c	3.2	3.0	...a	3.0	2.8	3.1
5	1.5	2.3	2.7	3.0	3.1	3.1	3.2	3.1	3.1	3.1	2.9	2.5	1.9
6	1.6	2.3	2.7	3.0	3.1	3.1	3.1	3.2	3.2	3.1	2.9	2.5	2.1
7	...a	2.3	2.7	p3.0	3.3h	3.5	...c	3.1	3.1	3.1	2.9	2.6	2.1
8	1.7	2.0	2.6	3.2	3.2	3.1	3.3	3.0	3.2	3.0	2.9	2.5	2.1
9	1.8	2.1	2.7	2.7	p2.8	3.2	3.1	3.1	3.1	3.1	2.9	2.5	2.0
10	1.7	2.0	2.5	3.0	3.0	3.1	3.2	3.2	3.1	3.1	2.9	2.5	2.0
11	...a	...a	...a	2.9	2.9	3.1	3.1	3.2	3.2	3.0	2.9	2.5	1.9
12	1.9	2.1	2.5	2.8	3.1	3.1	3.0	3.2	3.2	3.2	2.9	2.2	...a
13	1.7	2.3	2.7	2.8	3.0	3.1	...a	...a	3.1	3.1	3.0	2.6	1.9
14	1.8	2.5	2.6	2.9	3.0	3.0	3.0	2.9	3.0	3.2	2.9	2.6	2.1
15	1.7	2.0	2.6	2.9	3.1	3.2	3.2	p3.0	...a	3.1	2.8	...e	...a
16	1.4	2.2	2.6	2.9	3.1	p3.1	3.2	3.2	3.2	3.2	2.9	2.5	1.9
17	1.5	2.2	2.6	2.9	...c	...c	...c	...c	...c	...c	2.9	2.5	2.1
18	1.5	2.2	2.8	3.0	3.1	2.8	3.2	3.0	3.0	3.0	2.9	2.6	2.0
19	1.6	2.4	2.7	3.0	3.1	3.0	3.0	3.2	3.2	3.2	2.9	2.6	1.9
20	1.9	2.0	2.8	3.0	2.9	3.2	3.0	3.2	3.2	3.2	2.9	2.5	...a
21	1.4	2.1	2.4	2.9	2.8	3.2	...a	3.0	3.3	...c	3.0	2.5	1.8
22	...c	...c	2.7	2.9	...a	2.9	2.9	...a	3.1	3.0	...a	2.5	1.9
23	1.6	2.2	2.6	2.9	3.2	3.2	3.2	3.2	...a	3.2	2.9	p2.6	...c
24	...c	...c	2.5	2.9	3.0	...c	3.1	3.0	3.1	3.1	2.9	2.5	2.0
25	1.3	2.2	2.5	2.9	3.0	3.0	3.0	3.0	3.1	3.1	3.2	2.4	2.0
26	1.6	2.4	2.6	2.9	3.0	3.0	2.9	3.0	3.1	3.0	2.8	2.5	1.6
27	1.4	2.1	2.6	2.9	2.9	3.0	3.0	2.9	...a	...a	2.8	2.5	1.9
28	...a	2.3	2.9	...a	...a	...a	...a	...c	...a	3.0	...c	2.4	1.8
29	1.4	2.0	2.5	2.9	3.1	3.1	3.1	3.1	3.2	3.1	p2.7	2.5	1.8
30													
31													
* MEAN	1.6	2.2	2.6	2.9	3.0	3.1	3.1	3.1	3.1	3.1	2.9	2.5	2.0

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 279

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — MARCH 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.9	4.0	4.1	3.9	4.0	4.1	3.8	4.7	5.3	5.2	5.6	5.6	6.5	7.1	7.2	7.3	7.2	6.3	5.3	5.0	4.4	4.0	3.7	3.7	5.1
2	3.7	3.7	3.8	3.9	3.6	3.5	3.9	4.7	4.9	5.4	5.2	5.9	7.6	7.3	6.5	7.0	6.6	6.5	5.7	5.5	4.6	3.1	2.8	3.1	4.9
3	3.1	3.5	3.7	3.7	3.2	3.2	3.8	4.2	4.6	5.2	5.7	6.0	5.3	6.2	7.3	8.0	7.5	6.8	6.3	5.7	4.5	3.3	3.0	2.9	4.9
4	3.0	3.0	3.0	3.2	3.2	3.1	3.7	4.9	5.3	5.8	6.0	...c	6.8	7.0	7.9	8.2	8.0	9.1	...c	...c	...c	5.2	4.2	4.4	...
5	4.2	3.7	3.5	2.9	2.4	2.3	3.0	4.1	4.5	4.9	...a	5.6	5.2	5.6	6.2	6.6	6.5	6.4	6.6	6.1	4.4	2.9	2.6	2.7	...
6	2.8	2.9	2.8	3.2	3.0	3.0	3.5	4.4	4.3	4.6	5.0	5.6	6.4	7.7	7.9	6.3	6.1	6.2	5.6	5.6	p5.4	4.7	3.9	3.2	4.8
7	3.6	3.4	3.6	3.3	3.1	3.0	3.4	4.3	4.4	4.5	4.6	4.8	4.8	5.7	5.8	5.4	5.7	5.2	5.4	4.8	4.1	3.3	3.8	3.6	4.3
8	3.7	4.1	4.0	4.3	3.6	3.0	3.6	4.5	5.2	5.9	6.4	7.1	6.3	5.8	5.8	6.1	5.7	5.6	5.9	5.6	5.1	4.0	3.6	3.2	4.9
9	3.3	3.5	3.5	3.3	3.8	3.3	4.0	4.6	5.3	4.6	5.1	5.5	6.1	6.5	6.5	6.6	6.0	5.3	5.8	6.3	5.1	4.1	3.7	3.3	4.8
10	2.9	2.9	3.1	2.7	2.7	2.8	3.4	4.4	4.4	5.0	5.3	6.4	7.6	7.8	8.3	7.8	7.3	6.9	8.5	7.1	4.1	3.5	3.3	3.2	5.1
11	3.4	3.2	3.0	p2.3	2.3	2.5	2.8	4.1	4.6	4.8	5.4	6.0	7.1	7.3	6.9	6.3	...c	...c	...c	5.6	...c	3.5	3.2	2.9	...
12	3.1	3.1	3.0	2.6	2.7	2.7	3.3	4.2	4.6	4.9	...c	...c	...c	...c	...c	p6.8	p6.3	p6.2	5.5	5.2	4.6	3.2	2.9	2.7	...
13	2.6	3.3	3.0	3.3	2.4	2.0	2.8	4.0	4.6	5.3	5.7	5.2	6.0	6.5	6.2	5.6	5.7	5.1	5.5	4.6	4.3	3.5	3.2	3.4	4.3
14	3.3	3.5	3.3	3.0	2.6	2.4	3.2	4.5	5.1	6.1	6.1	6.3	6.1	6.9	7.6	7.3	6.3	6.3	5.2	4.7	4.1	3.4	3.2	3.4	4.8
15	3.3	3.3	3.5	3.5	2.9	2.7	3.3	4.6	5.6	6.2	5.8	6.1	7.3	7.4	7.9	7.8	7.0	7.1	6.6	4.7	3.8	3.4	3.3	3.4	5.0
16	3.4	3.4	3.5	3.5	3.2	2.9	3.4	4.9	5.5	p5.3	...c	...c	...c	...c	7.5	7.4	7.5	6.6	6.4	5.0	4.0	3.4	3.3	3.4	...
17	3.4	3.4	3.4	3.5	3.1	3.0	3.4	4.6	4.8	5.2	5.5	6.0	6.2	6.8	6.7	6.7	6.3	6.4	5.8	5.2	3.9	3.6	3.5	3.4	4.7
18	3.2	3.1	3.2	3.3	3.3	3.3	3.7	5.2	5.6	6.2	6.6	6.5	6.4	6.6	6.8	6.6	6.5	6.8	6.6	5.7	4.5	4.0	3.8	3.7	5.0
19	3.6	3.6	3.5	3.6	3.5	3.5	3.9	5.2	5.5	7.0	6.8	6.5	7.9	8.5	7.8	6.4	p6.0	5.8	5.6	5.5	5.3	4.7	4.0	3.6	5.3
20	3.7	2.9	2.7	2.9	3.5	3.3	3.5	5.1	6.4	7.3	7.8	8.7	7.2	6.8	7.8	7.6	7.4	7.0	7.3	5.6	4.4	4.4	...c	...c	...
21	4.5	4.8	4.8	4.5	4.3	4.0	4.1	6.5	6.9	7.0	7.5	8.6	8.9	10.0	10.2	9.3	9.0	8.3	6.6	4.9	4.2	4.0	3.8	3.9	6.3
22	4.0	4.0	4.0	3.7	3.1	3.4	3.8	5.5	5.8	7.2	7.4	8.3	9.0	9.2	9.5	9.9	9.7	7.9	6.4	4.8	4.0	3.8	3.8	3.8	5.8
23	4.1	4.3	4.4	3.3	3.3	3.4	3.9	5.8	6.4	6.2	7.3	7.8	8.4	8.4	7.7	7.8	8.6	7.6	6.6	4.7	3.6	3.7	3.5	3.7	5.6
24	3.7	3.7	3.5	3.3	3.2	3.4	3.6	5.0	5.6	6.5	6.6	7.1	7.3	7.3	6.8	6.8	6.8	7.0	6.3	5.0	3.7	3.6	3.8	3.9	5.2
25	3.8	p3.8	p3.6	3.1	3.0	3.1	3.6	5.0	5.5	5.8	6.2	6.5	7.3	7.4	6.5	7.5	7.8	7.3	7.0	5.4	5.2	4.5	3.6	3.5	5.2
26	3.8	3.8	3.7	4.0	4.3	4.3	4.3	6.0	5.6	5.7	6.7	7.7	8.6	8.6	10.0	9.5	7.7	8.0	6.6	5.4	5.8	4.7	4.4	4.8	6.0
27	4.1	4.6	3.9	3.6	3.8	3.3	3.1	4.0	4.5	4.1	4.8	p5.2	5.5	p5.4	5.0	4.3	4.4	4.4	4.5	3.6	3.8	2.6	2.8	2.9	4.1
28	3.1	3.0	3.2	3.3	2.6	2.5	3.1	4.5	5.3	5.1	5.3	6.0	6.9	7.3	6.8	6.1	6.5	6.1	5.2	4.1	3.7	3.2	2.9	2.9	4.5
29	3.0	3.1	3.0	2.8	...f	...f	2.4	4.2	4.7	5.1	5.6	5.3	6.4	6.6	5.4	5.8	6.0	5.4	4.6	3.6	2.9	2.2	2.2	...f	...
30	2.0	2.4	2.6	3.1	2.5	2.5	2.7	4.8	6.0	6.4	7.9	8.6	9.7	p9.1	7.3	7.2	7.3	7.0	5.6	4.9	4.1	4.0	3.4	3.8	5.2
31	3.7	4.0	3.8	3.9	3.5	3.2	3.0	4.3	4.9	5.3	5.9	6.2	6.7	6.4	7.1	7.0	6.3	6.2	5.9	5.5	4.1	3.8	3.6	3.7	4.9
MEAN*	3.4	3.5	3.5	3.4	3.2	3.1	3.4	4.7	5.2	5.6	6.1	6.5	7.0	7.2	7.2	7.1	6.9	6.6	6.0	5.2	4.3	3.7	3.4	3.4	5.0

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 280

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1944 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS MARCH 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	255	250	...a	...a	...a	...a	240	235	270	300	265	325	330	300	310	290	270	230	245	220	230	230	240	260	...
2	240	255	250	230	220	240	220	220	310	280	370	385	300	295	320	285	270	250	230	220	200	215	260	240	263
3	270	260	...a	265	...a	...a	230	210	370	300	300	290	350	340	300	280	255	255	215	210	200	225	250	225	...
4	230	230	220	220	280	...c	250	225	230	275	295	...c	300	305	300	280	285	285	...c	...c	...c	235	285	270	...
5	260	260	240	240	215	245	235	...	320	295	...a	320	370	365	310	300	280	265	245	210	200	200	250	250	...
6	270	265	...a	...a	260	270	240	225	360	390	480	330	305	320	280	300	295	255	240	230	p230	210	...a	...a	...
7	270	...a	...a	240	250	260	255	230	290	...	490	425	...	340	310	340	300	300	255	...a	240	...a	220	260	...
8	290	280	...a	...a	...a	210	...c	200	285	300	300	290	300	325	340	300	290	285	245	220	230	220	250	...a	...
9	265	...a	...a	240	...a	265	235	220	270	200	370	...a	320	330	320	300	300	230	250	225	230	220	220	285	...
10	270	280	270	...a	...a	...a	230	230	245	340	335	345	285	310	290	280	275	280	225	210	200	270	235	300	...
11	...a	270	...a	p275	230	...a	...a	230	300	350	350	350	300	300	290	...a	...c	...c	...c	230	...c	250	235	270	...
12	260	250	...a	...a	240	...a	230	230	235	335	...c	...c	...c	...c	...c	290	280	260	240	210	210	220	250	280	...
13	330	...a	...a	...a	270	215	260	240	300	350	290	430	350	315	300	300	290	270	240	220	225	235	...a	...a	...
14	...a	270	270	...	240	230	245	225	310	290	290	290	365	320	325	285	290	255	225	235	...a	240	260	255	...
15	285	275	250	...a	240	230	240	225	265	265	290	320	300	300	290	270	285	250	...a	...a	240	260	250	250	...
16	245	260	245	230	220	240	240	250	250	...c	...c	...c	...c	...c	290	290	255	255	230	200	220	240	235	240	...
17	235	250	260	215	240	250	255	230	325	310	...c	300	320	290	290	275	270	240	...c	215	195	230	240	...a	...
18	...a	...a	...a	235	235	225	230	230	230	275	265	280	...c	300	290	275	270	255	230	200	210	230	240	240	...
19	240	245	255	235	245	245	255	200	240	250	300	420	365	300	290	285	p290	265	245	...a	240	225	220	250	...
20	235	270	250	255	240	215	235	240	225	290	300	260	295	340	285	275	260	240	225	195	225	230	...c	...c	...
21	270	240	230	...a	225	210	245	230	240	240	285	300	290	290	270	270	260	235	215	215	225	220	...a	...a	...
22	...a	240	240	215	230	225	250	230	280	280	280	280	280	300	300	275	240	240	220	210	...a	...a	...a	...a	...
23	270	240	215	195	250	250	255	240	250	310	290	300	280	280	280	300	260	240	215	200	235	...a	...a	...a	...
24	240	230	215	...a	240	250	255	230	300	255	290	285	270	275	300	290	265	250	215	210	220	260	260	250	...
25	250	p245	p230	230	...a	...a	235	235	260	255	285	300	285	280	300	280	270	250	220	220	220	220	230	...a	...
26	...a	250	260	250	240	250	250	225	255	225	310	300	290	305	300	250	270	250	240	...a	255	...a	290	295	...
27	290	260	235	275	270	270	270	240	370	...	480	p480	420	p365	360	p400	240	...a	...a	...a	...a	...a	...a	270	...
28	...a	270	230	225	230	235	235	235	220	230	370	330	305	270	...a	285	275	245	220	240	260	240	220	265	...
29	265	245	250	260	240	220	255	235	360	340	400	345	340	320	355	340	300	275	230	215	230	245	275	310	285
30	...a	...a	...a	250	235	250	250	250	280	320	290	300	275	p250	275	260	265	235	225	230	220	230	...a	...a	...
31	...a	...a	250	230	220	230	210	215	215	295	350	320	280	300	290	270	260	235	220	220	...a	...a	...a	...a	...
MEAN*	262	256	243	239	242	239	243	227	279	291	330	332	314	308	302	291	274	254	231	216	215	232	246	263	264

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 281

MARCH 1944 | **IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY** | MARCH 1944

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	3.8	4.1	4.2	4.3	4.4	4.3	4.3	4.1	4.0	...	...
2	...	...	4.0	4.1	4.3	4.3	4.3	4.4	4.3	4.2	3.8	3.6	...
3	...	...	3.9	4.1	4.4	4.3	4.4	4.3	4.3	4.2	4.0	3.6	...
4	...	...	3.8	4.2	4.3	...c	4.4	4.4	4.4	4.2	4.0	3.7	...
5	...	...	3.7	...a	...a	...a	4.3	4.3	4.2	4.0	3.9	3.6	...
8	...	...	3.8	4.1	4.1	4.2	4.3	4.2	4.3	4.2	4.0	3.5	...
7	...	...	3.8	4.1	4.1	4.2	4.2	4.1	4.1	4.0	3.8	3.6	...
8	...	...	4.0	4.0	4.1	4.3	4.3	4.1	4.2	4.2	3.9	3.4	...
9	...	...	3.6	...	4.1	...a	4.2	4.2	4.2	4.1	3.9	...	...
10	...	...	...	4.2	4.3	4.3	4.3	4.4	4.3	4.2	3.9	3.7	...
11	...	...	3.7	4.1	4.2	4.3	4.3	4.4	4.3	...c	...c	...c	...
12	...	...	...	4.1	...c	...c	...c	...c	...c	4.2	3.9	3.5	...
13	...	...	3.7	4.0	4.2	4.2	4.2	4.2	4.2	4.1	3.9	3.3	...
14	...	...	3.8	4.2	4.3	4.3	4.5	4.3	4.3	4.2	3.9	3.4	...
15	...	...	3.8	4.2	4.3	4.4	4.4	4.4	4.3	4.1	4.1	3.5	...
16	...	...	3.7	...c	...c	...c	...c	...c	4.3	4.3	3.9	3.4	...
17	...	...	4.0	4.1	4.3	...c	...c	...c	...c	4.2	4.0	...c	...
18	...	...	3.7	4.2	4.4	...c	...c	...c	4.3	4.2	4.0	...	...
19	...	...	...	4.2	...c	...c	4.1	4.3	4.3	4.2	3.9	...	...
20	...	...	...	4.0	4.4	...c	...c	...c	4.3	4.3	4.1	...	...
21	...	...	...	4.1	4.6	4.7	4.5	4.4	4.4	4.2	...	...	...
22	...	...	3.9	4.3	4.4	4.5	4.5	4.5	4.4	4.3	3.8	...	...
23	...	...	3.6	4.3	4.3	4.5	4.5	4.5	4.3	4.3	4.0	...	...
24	...	...	4.0	4.1	4.2	4.5	4.3	4.4	4.4	4.3	3.9	...	...
25	...	...	3.6	4.1	4.4	4.5	4.4	4.4	4.5	4.1	3.9	...	...
26	...	...	3.7	4.2	4.4	4.6	4.4	4.5	4.4	4.2	4.0	...	...
27	...	...	3.6	3.8	3.9	3.8	3.9	4.0	4.0	4.0	...	...	...
28	...	...	...	...	4.2	4.3	4.1	4.3	...a	4.1	3.8	...	...
29	...	...	3.9	4.1	4.1	4.3	4.2	4.2	4.2	3.9	3.8	3.2	...
30	...	...	3.7	4.4	3.8	4.3	4.4	4.3	4.1	4.0	4.0	...	...
31	...	...	3.9	3.9	4.3	4.2	4.3	4.3	4.3	4.1	3.7	...	...
* MEAN	...	...	3.8	4.1	4.2	4.3	4.3	4.3	4.3	4.2	3.9	3.5	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	18	17	18
1	...	...	215	205	200	200	190	180	210	210	230	...	...
2	...	...	225	225	210	200	195	190	230	240	220	220	...
3	...	...	210	215	210	205	225	230	220	230	p225	230	...
4	...	...	220	210	200	...c	210	205	215	215	250	220	...
5	...	...	225	...a	...a	...a	200	200	220	200	235	230	...
8	...	...	210	210	200	185	...	...	...	...	225	235	...
7	...	...	250	230	200	220	230	210	250	230	225	200	...
8	...	...	220	220	200	190	200	220	200	240	...a	230	...
9	...	...	...c	...	...a	...a	...a	...a	250	255	235	...	...
10	...	...	...	...a	...a	200	...a	...a	250	230	235	255	...
11	...	...	230	...a	200	200	...h	270	...a	...c	...c	...c	...
12	...	...	...	220	...c	...c	...c	...c	...c	230	230	220	...
13	...	...	245	225	230	205	190	200	230	220	230	230	...
14	...	...	225	220	195	190	185	190	245	230	210	230	...
15	...	...	225	220	210	210	200	200	200	235	220	235	...
16	...	...	235	...c	...c	...c	...c	...c	240	235	220	230	...
17	...	...	225	230	...c	...c	210	...c	215	220	...c	...c	...
18	...	...	230	240	220	210	...c	220	215	225	220	...	...
19	...	...	...	220	205	210	190	230	250	230	235	...	...
20	...	...	...	210	195	205	220	230	240	235	230	...	...
21	...	...	...	230	210	210	205	210	225	235	...	...	...
22	...	...	230	230	210	200	200	220	230	220	225	...	...
23	...	...	225	215	210	200	220	225	230	240	230	...	...
24	...	...	220	215	...b	200	220	210	220	240	220	...	...
25	...	...	225	210	200	180	200	215	225	215	250	...	...
26	...	...	220	230	220	210	210	220	225	235	235	...	...
27	...	...	245	...a	...a	...a	...a	...a	...a	230	...	...	...
28	...	...	...	...	190	200	180	230	...a	210	200	...	...
29	...	...	...	230	230	...h	215	215	235	235	240	230	...
30	...	...	245	220	200	210	220	220	205	235	235	...	...
31	...	...	240	205	220	215	...a	235	...a	235	230	...	...
* MEAN	...	...	218	220	207	202	205	216	227	229	228	228	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 282

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	...e	...
2	...	0.6	0.6	0.8	1.1	1.1	1.0	1.0	0.9	0.6	0.6	...e	...
3	...	...e	...e	0.6	0.9	1.0	1.0	1.0	1.0	1.0	0.8	0.7	...
4	...	...e	0.7	1.0	1.0	...c	1.0	1.1	1.0	1.0	0.9	0.6	...
5	...	...e	0.6	0.8	0.8	0.9	0.9	0.8	1.0	0.8	0.6	0.5	...
6	...	...e	1.0	0.5	0.7	1.0	0.9	1.0	1.0	0.9	0.8	0.5	...
7	...	...e	...e	...e	...e	0.9	0.8	0.8	0.7	0.7	...e	...e	...
8	...	...e	...e	...e	0.8	0.8	0.8	0.8	0.7	...e	...e	0.7	...
9	...	...e	...e	...e	0.9	0.9	0.9	0.9	0.9	0.8	...e	...e	...
10	...	...e	...e	0.6	0.8	0.9	0.7	0.9	0.9	0.8	0.7	0.6	...
11	...	...e	...e	0.6	0.9	...c	...c	...c	...c	...c	...c	...c	...
12	...	...e	...e	...e	0.8	...c	...c	...c	...c	0.8	0.8	0.8	...
13	...	...e	0.8	0.8	0.8	0.9	1.0	0.9	0.9	0.7	0.7	0.5	...
14	...	...e	0.8	0.7	0.8	0.8	0.9	1.0	1.0	0.8	0.7	...e	...
15	...	...e	...e	0.7	...e	0.8	0.9	0.8	0.9	0.7	...e	...e	...
16	...	...e	...e	0.7	...c	...c	...c	...c	0.9	0.8	0.8	0.6	...
17	...	0.6	0.7	0.6	0.8	0.8	0.8	1.0	0.9	1.0	0.8	0.8	...
18	...	0.6	0.8	0.8	0.8	1.0	0.9	0.9	0.9	0.9	0.8	0.6	...
19	...	0.6	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.8	0.8	0.6	...
20	...	0.6	0.8	0.8	1.0	1.1	1.1	1.0	1.0	0.8	0.8	...e	...
21	...	...e	0.6	0.7	0.9	0.9	0.9	0.9	1.0	0.8	0.7	0.6	...
22	...	0.6	0.6	0.8	0.8	1.0	1.0	1.0	1.0	0.8	0.8	...e	...
23	...	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.8	0.6	...
24	...	...e	0.6	0.8	...b	...b	...b	1.0	1.0	1.0	1.0	0.6	...
25	...	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	...e	...
26	...	0.6	0.7	0.7	0.8	0.9	0.9	1.0	0.9	0.8	...e	...e	...
27	...	...e	0.8	0.9	1.0	1.1	1.0	1.0	1.0	1.0	0.8	0.6	...
28	...	...e	...e	0.8	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.6	...
29	...	0.8	0.9	0.7	0.8	0.9	1.0	1.0	1.0	0.9	0.8	0.6	...
30	...	0.7	0.6	0.8	0.9	1.0	0.9	1.0	1.0	0.9	0.8	0.6	...
31	...	0.7	0.7	0.6	1.0	1.0	0.9	1.0	0.8	0.6	p0.8	...e	...
MEAN*	...	0.6	0.6	0.7	0.9	1.0	1.0	1.0	0.9	0.8	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.3	2.2	2.5	2.9	3.0	3.1	3.2	3.2	3.2	3.2	2.8	2.4	2.2
2	1.4	2.1	2.8	2.8	2.9	3.1	3.2	3.2	3.2	3.1	2.9	2.4	1.8
3	...a	2.1	2.6	2.7	3.0	3.1	3.2	3.2	3.1	2.9	2.8	2.5	1.8
4	2.4	2.2	2.9	2.8	3.1	...c	2.9	3.0	3.2	3.2	2.8	2.5	...c
5	1.4	1.8	2.3	2.5	...a	3.1	...a	...a	...a	3.0	2.8	2.3	2.0
6	1.3	2.0	2.4	...a	3.0	2.9	3.0	3.2	3.2	3.0	2.8	2.4	1.7
7	1.3	1.9	2.4	2.8	2.9	2.9	3.0	3.1	3.1	3.0	2.8	2.6	1.8
8	...c	2.1	2.6	2.4	3.2	3.1	2.9	3.3	2.9	2.9	...a	2.5	1.7
9	...a	2.1	2.6	2.8	...a	...e	3.1	3.0	2.9	2.9	2.8	2.2	...a
10	1.6	1.8	2.5	2.7	3.0	3.1	2.9	2.9	3.1	3.0	2.7	2.3	...
11	...a	1.8	2.3	2.7	2.9	3.1	3.0	2.9	...c	...c	...c	...c	...c
12	1.3	1.9	2.4	2.7	...c	...c	...c	...c	...c	2.9	2.8	2.1	1.6
13	1.4	1.9	2.4	2.7	3.0	3.0	2.9	3.0	3.0	2.9	2.7	2.3	1.6
14	1.1	2.0	2.5	3.0	2.9	3.0	2.9	3.0	3.0	3.0	2.7	2.3	1.6
15	...a	2.1	2.7	2.7	2.8	2.9	2.9	3.2	3.2	2.9	2.7	2.4	...a
16	1.1	2.0h	2.5h	2.7	...c	...c	...c	...c	3.2	3.0	2.8	2.3	1.6
17	1.2	2.0	2.5	2.8	3.0	...c	...c	...c	...c	...c	2.9	...c	1.5
18	1.2	2.0	2.5	2.8	3.0	2.9	2.9	3.2	3.2	3.0	2.8	2.4	1.6
19	1.1	1.7	2.7	3.0	3.1	3.1	3.2	3.1	3.2	3.0	2.8	2.4	...a
20	1.0	1.9	2.6	2.8	2.8	2.8	2.9	2.9	2.9	3.0	2.7	2.4	1.6
21	1.1	2.1	2.6	2.9	3.0	3.2	3.3	3.2	3.2	3.0	2.7	2.3	1.4
22	1.1	2.0	2.5	2.9	3.1	3.1	3.1	3.2	3.2	2.9	2.8	2.7	1.6
23	1.0	2.0	2.5	2.8	3.0	3.1	3.3	3.3	3.1	2.9	2.9	2.3	1.4
24	1.1	2.0	2.5	2.9	...b	3.0	3.2	3.2	3.1	3.0	2.6	2.3	1.3
25	...	2.0	2.5	3.0	2.9	3.1	3.2	3.1	3.2	3.0	2.7	2.4	...a
26	...	2.0	2.5	2.8	2.9	2.9	2.9	2.9	2.9	3.0	2.9	2.3	1.7
27	...	2.0	2.3	2.7	2.9	3.0	3.0	3.0	3.0	3.0	2.6	2.1	...a
28	1.1	1.9	2.3	2.6	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.7	1.6
29	...	2.0	2.0	2.7	2.9	3.1	3.1	3.2	3.0	2.7	2.5	2.0	...e
30	1.1	1.9	2.4	2.8	2.9	3.0	2.8	2.8	3.0	2.8	2.6	2.1	...a
31	...	2.0	2.2	2.4	2.9	3.2	3.2	3.2	3.1	2.9	2.6	...a	1.3
MEAN*	1.3	2.0	2.5	2.8	3.0	3.0	3.0	3.1	3.1	3.0	2.8	2.4	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 283

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — APRIL 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.7	p3.5	3.3	3.3	3.2	3.0	3.4	4.7	5.6	5.7	5.5	6.2	6.7	p7.2	6.5	6.1	6.4	6.3	6.2	3.3	3.1	3.0	3.0	3.1	4.7
2	3.3	3.4	3.6	3.4	3.6	2.9	3.2	4.9	5.2	5.6	6.5	5.7	7.2	7.5	7.3	5.7	5.2	5.9	5.9	p8.0	5.3	...f	...f	3.1	...
3	p2.6a	...a	...a	...a	2.9	3.2	2.3	3.8	3.8	4.2	p4.6	5.2	5.8	6.3	5.9	5.9	5.5	5.1	4.5	3.0	2.8	2.9	2.7	2.4	...
4	2.4	...f	2.5	2.3	2.3	2.2	2.4	4.1	5.0	5.9	5.9	6.2	7.5	...c	6.6	6.0	7.4	6.1	5.5	4.5	3.7	3.6	2.6	2.8	...
5	2.8	3.0	2.8	2.9	2.8	2.8	2.6	4.7	5.2	6.5	5.8	...c	6.8	7.0	7.5	6.5	6.8	6.0	4.5	4.1	3.4	3.3	3.4	2.9	...
6	3.2	3.2	3.2	2.8	2.9	2.9	2.8	3.9	4.5	...c	...c	...c	6.9	6.1	5.9	...c	6.0	6.1	5.2	3.8	4.3	3.4	3.2	3.4	...
7	3.1	2.9	2.8	2.8	2.8	2.7	2.7	4.2	4.8	5.9	6.7	6.5	5.8	6.3	6.1	5.6	5.8	5.5	4.7	3.5	3.2	3.3	3.2	3.2	4.3
8	2.9	2.7	2.6	2.9	2.8	2.4	2.7	4.1	5.5	5.5	5.4	5.7	6.6	7.2	6.6	6.4	6.7	6.4	5.0	3.8	3.4	3.4	3.4	3.4	4.5
9	3.4	3.4	3.3	3.1	2.9	2.6	2.9	4.4	5.3	5.7	6.2	5.7	6.0	7.4	6.7	7.2	6.4	6.5	4.8	3.5	3.0	3.4	3.5	3.3	4.6
10	3.3	3.5	3.5	3.6	3.8	2.9	3.0	4.5	4.9	5.9	6.1	6.4	6.2	6.5	6.6	8.3	8.4	...c	5.8	4.2	2.9	3.7	3.1	3.3	...
11	3.4	3.7	3.8	3.7	3.7	3.8	3.6	5.4	...c	...c	...c	6.7	7.2	6.8	6.8	6.9	6.5	6.2	5.4	4.1	4.0	3.6	3.5	3.5	...
12	3.6	3.8	3.8	3.9	4.2	3.1	3.2	4.7	5.6	5.8	6.2	6.8	7.3	7.4	7.3	7.1	7.3	6.4	5.1	3.8	3.1	3.4	3.5	3.5	5.0
13	3.5	3.6	3.6	...f	...f	2.5	2.5	4.4	5.0	6.3	6.8	7.6	7.0	6.7	6.8	...c	6.5	...c	p5.5c	...c	...c	...c	...c	...c	...
14	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
15	3.8	3.8	3.8	3.8	3.2	3.2	3.3	5.1	6.1	6.2	6.3	5.6	p6.2	6.6	6.9	7.1	7.0	6.0	4.8	3.6	3.2	4.0	3.9	p4.0	4.9
16	4.1	4.0	4.1	4.1	4.1	3.7	3.8	4.7	5.5	6.4	...c	...c	...c	8.8	9.8	10.7	...c	...c	5.5	4.0	4.3	4.4	4.3	4.4	...
17	4.1	3.5	2.6	2.7	2.4	2.6	2.9	5.4	6.8	7.2	8.1	7.5	8.3	7.2	7.2	p7.5	7.2	6.7	4.5	3.2	2.7	2.9	3.1	3.3	5.0
18	3.3	3.2	3.0	3.1	2.3	2.4	4.8	6.1	7.2	7.2	7.2	7.1	8.2	8.4	8.2	7.4	6.4	4.6	3.6	3.4	3.6	3.7	3.6	3.7	5.1
19	3.6	3.6	3.5	3.5	3.7	2.4	2.2	4.3	5.5	6.3	6.7	6.9	6.7	7.6	6.9	8.0	7.9	5.5	4.0	2.7	2.6	3.0	3.2	2.9	4.7
20	3.0	3.0	3.0	3.5	3.8	3.5	2.9	5.3	p5.5	p6.3	6.6	6.8	p6.4	6.7	7.0	7.3	7.2	5.4	4.2	2.8	2.8	3.4	3.5	3.4	4.7
21	3.4	3.6	3.6	3.6	3.7	3.1	3.0	4.8	5.6	6.2	7.3	7.8	6.3	6.4	7.1	7.4	6.8	6.2	4.1	2.9	2.8	3.5	3.6	3.6	4.8
22	3.9	3.8	3.8	3.8	3.5	3.4	3.4	4.7	5.7	6.1	7.1	6.8	6.2	6.5	7.1	7.1	6.6	6.0	4.3	2.8	3.1	3.8	3.7	3.9	4.9
23	4.0	4.1	4.0	4.3	4.3	4.1	3.6	4.6	5.7	6.4	8.0	...c	p7.7	...c	...c	7.1	7.1	...c	4.7	2.8	2.9	3.3	3.6	3.6	...
24	3.8	3.9	4.0	4.3	4.6	3.6	2.5	4.3	5.0	5.6	6.6	6.5	5.8	6.8	7.4	8.6	8.6	8.1	5.5	2.9	2.6	3.1	3.1	3.2	5.0
25	3.6	4.0	4.1	4.2	4.2	3.0	2.6	4.2	5.7	6.3	7.2	8.7	8.7	6.8	7.9	7.4	7.0	5.5	4.1	2.8	2.5	2.9	2.9	2.9	5.0
26	3.0	3.0	3.2	3.6	3.2	2.5	2.1	4.4	5.4	6.5	6.6	7.6	8.1	7.2	8.5	...c	6.9	6.5	5.0	2.6	2.5	2.9	2.7	2.8	...
27	3.0	3.1	3.2	3.3	3.8	2.4	2.1	4.2	5.0	5.7	7.0	6.5	6.4	7.2	7.8	...c	...c	...c	4.3	3.3	2.6	2.8	2.8	3.2	...
28	3.2	3.5	3.8	3.3	3.6	3.5	3.6	4.6	5.3	...c	...c	...c	6.8	7.2	7.2	8.7	6.5	...c	4.3	3.4	3.7	3.8	3.9	4.1	...
29	4.2	4.2	4.2	4.1	4.2	3.9	2.5	4.8	5.4	6.1	6.4	7.6	8.0	6.1	7.5	6.2	6.2	6.4	4.2	2.5	3.0	3.6	4.0	3.9	5.0
30	4.2	4.1	4.2	4.4	4.2	3.2	2.7	4.9	5.1	6.3	6.8	7.2	6.3	6.9	7.7	7.1	6.9	5.6	4.3	2.7	2.3	3.2	3.2	3.3	4.9
31																									
MEAN*	3.4	3.5	3.5	3.5	3.4	3.0	2.9	4.6	5.4	6.1	6.5	6.7	6.9	7.0	7.2	7.2	6.8	6.0	4.8	3.5	3.2	3.4	3.3	3.4	4.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 284

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1944 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	p245	260	250	250	260	220	230	265	260	310	290	290	p280	280	290	260	240	215	210	240	250	230	240	256
2	240	240	250	230	210	225	220	225	220	290	280	350	320	320	280	300	390	350	260	p280	295	240	250	p250	271
3	...a	...a	...a	...a	...a	...a	250	250	225	235	p415	360	340	320	300	285	260	250	220	...a	...a	...a	270	260	...
4	275	255	250	260	280	255	260	225	260	270	...a	320	280	...c	290	290	260	230	230	...a	...a	250	300	265	...
5	285	270	270	260	250	240	230	230	260	260	p265c	...c	315	295	265	285	250	235	230	...a	...a	270	220	265	...
6	290	240	215	220	240	235	230	235	260	...c	...c	...c	280	280	290	...c	260	240	215	...a	...a	265	250	265	...
7	230	265	280	240	255	225	220	240	230	285	260	260	300	290	275	300	270	240	210	310	255	250	265	195	256
8	230	255	255	240	225	225	255	235	245	285	280	325	290	260	270	280	260	230	210	215	230	245	240	245	251
9	250	240	235	225	220	205	245	220	265	275	260	290	300	235	270	260	260	230	200	200	230	230	235	240	242
10	245	250	245	240	220	200	220	225	235	270	275	270	285	285	330	275	240	...c	235	220	235	230	230	265	...
11	260	250	245	235	230	230	215	225	...c	...c	...c	295	275	260	290	260	250	230	200	225	220	235	235	240	...
12	255	240	245	250	210	215	235	225	250	280	270	275	265	235	265	270	240	215	210	...a	...a	...a	265	...a	...
13	260	255	250	270	...a	205	250	215	230	235	280	245	260	265	275	...c	235	...c	p205	...c	...c	...c	...c	...c	...
14	...c	...c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...c	...c	...
15	230	210	215	220	200	230	230	230	240	240	255	255	p275	280	270	245	235	225	200	195	240	235	220	p215	233
16	220	225	220	240	205	250	225	220	235	255	...c	...c	...c	290	285	260	...c	...c	200	235	250	280	280	240	...
17	240	205	270	240	240	250	220	230	220	240	245	265	270	270	280	p250	235	215	195	215	265	215	265	240	241
18	240	215	235	220	215	250	250	230	245	260	280	250	285	260	265	255	235	215	185	...a	...a	...a	265	...a	...
19	280	260	255	245	205	210	240	220	235	250	275	245	270	255	275	260	225	215	200	210	245	250	225	230	241
20	235	240	240	250	220	210	235	230	p230	p230	255	260	p270	285	270	260	240	215	200	215	275	215	245	240	240
21	250	235	240	255	225	245	230	220	240	270	260	250	...a	...a	265	250	235	220	200	220	270	240	250	245	...
22	240	230	220	215	220	220	220	225	240	255	255	255	270	270	255	250	235	220	235	215	240	230	240	255	238
23	240	235	245	245	215	220	215	220	240	270	265	...c	p240	...c	...c	p265	240	...c	195	195	230	245	225	230	...
24	235	240	240	235	210	190	250	220	230	265	275	270	270	300	300	270	260	215	190	205	250	245	250	...a	...
25	270	250	235	230	210	210	215	215	230	255	275	270	230	280	275	p245	235	220	210	...a	...a	...a	...a	255	...
26	250	...a	250	225	225	220	...a	215	235	255	275	280	260	290	260	...c	235	205	195	200	260	220	225	250	...
27	260	310	...a	260	210	...a	220	220	230	255	250	250	270	275	270	...c	...c	...c	200	210	230	220	230	...a	...
28	...a	245	240	220	235	220	210	220	225	...c	...c	...c	280	280	280	250	220	...c	200	240	230	230	230	235	...
29	235	235	230	230	225	210	170	215	240	235	260	240	240	295	275	250	235	215	200	190	270	240	...a	...a	...
30	245	240	225	215	210	200	245	240	215	255	270	240	265	285	270	275	225	220	190	200	...a	...a	...a	235	...
31																									
MEAN*	250	244	243	238	224	224	229	226	238	259	275	275	268	278	278	267	249	230	208	219	248	240	246	243	246

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 285

APRIL 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1944

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	3.6	4.1	4.5	4.3	4.2	4.4	4.2	4.1	3.8	...	...
2	...	...	...	4.0	4.2	4.3	4.3	4.2	4.1	4.0	3.7	3.3	...
3	...	...	...	...	p4.1	4.1	4.1	4.1	4.1	3.9	3.5	...	...
4	...	...	3.1	3.8	...a	4.3	4.2	4.2	4.1	4.0	3.6	...	...
5	...	...	...	3.9	p4.1	...c	4.4	4.2	4.2	4.0	3.8	...	...
6	...	...	...	...c	...c	...c	4.1	4.1	4.1	...c	3.6	3.0	...
7	...	...	...	3.8	4.1	4.2	4.3	4.2	4.2	4.0	3.7	...	...
8	...	...	...	4.0	4.2	4.1	4.3	4.2	4.1	4.1	3.7	...	...
9	...	...	...	3.9	4.2	4.3	4.2	p4.1	p4.0	4.1	3.8	...	...
10	...	...	...	4.0	4.2	4.3	4.3	4.3	4.4	4.0	3.6	...	...
11	...	...	...	3.9	4.3	4.1	4.2	4.3	4.2	3.9	3.6	...	...
12	...	...	...	4.0	4.1	4.2	4.3	4.3	4.2	4.0	3.6	...	...
13	...	...	...	...	4.2	4.3	4.3	4.3	4.2	...c	3.6	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	4.0	4.1	4.2	4.2	4.2	4.2	4.0	3.5	...	...
16	...	...	...	...	...c	...c	...c	4.3	4.3	4.1	...	...	...
17	...	...	...	4.0	4.2	4.1	4.2	4.1	4.4	p3.9	3.5	...	...
18	...	...	...	4.2	4.3	4.3	4.4	4.3	4.3	4.0	...	...	...
19	...	...	...	4.0	4.5	4.3	4.3	4.3	4.2	3.7	...	...	...
20	...	...	...	3.9	4.2	4.3	4.4	4.3	4.3	4.0	3.4	...	...
21	...	...	...	...	4.2	4.0	...a	...a	4.1	3.9	...	...	...
22	...	...	...	4.0	4.2	4.2	4.2	4.3	4.2	4.0	3.4	...	...
23	...	...	...	4.1	4.2	...c	p4.2	4.3	4.3	4.1	3.9	...	...
24	...	...	...	...	4.1	4.3	4.3	4.2	4.2	4.0	3.7	...	...
25	...	...	...	...	4.1	4.2	4.2	4.2	4.1	p3.8	...	...	...
26	...	...	...	4.0	4.0	4.2	4.2	4.2	4.2	...	...	...	...
27	...	...	...	...	4.1	4.3	4.3	4.2	4.1	...	...	...	...
28	...	...	...	...c	...c	...c	4.2	4.0	4.1	3.8	...	...	...
29	...	...	...	...	4.0	4.2	4.2	4.2	4.0	3.8	...	...	...
30	...	...	...	3.7	4.0	4.1	4.2	4.2	4.0	3.9	...	...	...
31													
* MEAN	...	...	3.4	4.0	4.2	4.2	4.2	4.2	4.2	4.1	3.6	3.2	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	215	230	205	200	200	p240	p225	220	235	...	...
2	...	...	...	220	220	...a	220	...a	245	220	240	250	...
3	...	...	...	...	p220	220	240	230	230	230	235	...	...
4	...	...	200	...a	...a	220	...a	215	240	220	250	...	...
5	...	...	...	260	p215	...c	200	200	240	230	215	...	...
6	...	...	...	...c	...c	...c	215	205	245	...c	225	235	...
7	...	...	...	200	245	210	190	200	230	215	225	...	...
8	...	...	...	220	...a	170	220	220	205	230	235	...	...
9	...	...	...	195	210	200	190	p180	p180	250	240	...	...
10	...	...	...	230	215	200	200	230	215	215	...c	...	...
11	...	...	...	210	250	195	200	240	230	230	200	...	...
12	...	...	...	230	230	230	210	240	225	220	225	...	...
13	...	...	...	...	220	200	220	220	220	...c	220	...	...
14	...	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...c	...c	...c	...c	...c	...c	...c	210	...	...
16	...	...	...	...	...c	...c	...c	...c	...c	225	...c	...	...
17	...	...	...	225	245	200	190	220	225	p220	220	...	...
18	...	...	...	220	225	205	...a	...h	245	225	...	...	...
19	...	...	...	230	...a	205	190	200	210	180	...	...	...
20	...	...	...	210	230	215	200	220	250	230	210	...	...
21	...	...	...	...	250	...a	...a	...a	...a	235	...	...	...
22	...	...	...	225	230	215	205	210	225	230	200	...	...
23	...	...	...	245	240	...c	p225c	205	200	205	240	...	...
24	...	...	...	...	240	220	205	200	225	235	230	...	...
25	...	...	...	...	230	230	220	220	240	p215	...	...	...
26	...	...	...	235	230	220	215	200	210	...c	...	...	...
27	...	...	...	...	240	230	195	190	230	...	...	...	...
28	...	...	...	...c	...c	...c	210	200	225	...c	...	...	...
29	...	...	...	...	215	215	...h	210	220	220	...	...	...
30	...	...	...	225	235	220	225	210	250	210	...	...	...
31													
* MEAN	...	...	208	224	229	210	208	209	226	222	225	242	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 286

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1944 | APRIL 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	...c	0.8	0.9	1.0	1.0	1.0	1.0	0.8	0.5	...e	...	...	1.9	2.4	2.7	2.8	2.9	2.9	2.9	3.0	2.8	2.6	...a	...
2	...	...e	0.5	0.5	0.8	0.9	0.9	0.9	1.0	0.8	0.6	...e	...	...	2.0	2.8	2.7	2.9	2.9	2.9	2.9	2.9	2.9	2.4	1.9	...
3	...	...e	0.6	0.9	0.9	1.0	0.9	1.0	1.0	0.8	0.8	0.5	...	...	1.9	2.3	2.6	2.8	2.9	2.8	2.9	2.9	2.7	2.5	2.0	...
4	...	...e	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.8	0.8	...	...	1.9	2.4	2.5	2.5	2.8	2.8	2.9	2.9	2.8	2.7	1.9	...
5	...	0.5	0.5	0.8	0.8	...c	0.9	1.0	1.0	0.8	0.9	...e	...	...	1.9	2.3	2.6	2.9	...c	2.9	2.9	3.0	2.8	2.4	...a	...
6	...	...e	0.8	...c	...c	...c	0.9	0.9	1.0	...c	0.7	0.7	...	...	1.8	2.3	...c	...c	...c	2.8	2.9	2.9	...c	2.6	2.0	...
7	...	...e	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.7	...e	...	...	2.0	2.2	2.8	2.9	3.0	3.1	2.8	3.0	2.9	2.5	1.7	...
8	...	...e	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.7	...e	...	...	1.9	2.2	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.6	1.9	...
9	...	...e	0.7	0.8	0.8	0.7	0.9	0.9	0.9	0.9	0.9	0.7	...	...	1.8	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.5	2.0	...
10	...	...e	0.8	0.8	1.0	1.0	0.9	1.0	0.9	0.8	...c	...c	...	...	2.0	2.5	2.9	2.9	2.9	2.9	2.9	3.0	2.8	...c	...c	...
11	...	...e	...e	...e	0.8	0.8	0.9	0.8	0.9	0.9	0.8	...e	...	...	1.7	2.5	2.9	2.9	2.8	2.8	2.5	2.8	2.8	2.5	1.9	...
12	...	...e	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7	...e	...	...	1.9	2.6	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.5	2.0	...
13	...	...e	...e	0.8	0.9	0.9	0.9	0.9	0.9	...c	...e	...c	...	...	1.7	2.3	2.8	2.8	2.8	2.8	2.7	2.7	...c	2.4	...	...
14	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
15	...	...e	0.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	1.9	2.5	2.7	2.8	2.7	2.7	2.7	2.7	2.8	2.0	1.7	...
16	...	...e	...c	0.8	...c	...c	...c	...c	...c	0.9	...c	...c	...	...	2.0	2.5	2.7	...c	...c	...c	2.8	2.8	2.8	...c	...c	...
17	...	...e	...e	0.8	0.9	0.9	0.9	1.0	0.9	0.8	0.8	...e	...	...	1.7	2.3	2.6	2.8	2.8	2.8	2.8	3.0	2.8	1.7	1.6	...
18	...	...e	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	...e	...	...	2.1	2.6	2.8	2.9	2.9	2.9	2.8	3.0	2.7	2.4	2.2	...
19	...	...e	...e	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.8	0.7	...	...	2.0	2.3	2.8	2.9	2.8	3.1	2.9	2.9	2.8	2.4	2.0	...
20	...	...e	0.7	...e	0.8	0.8	0.8	0.8	0.9	0.7	...e	...e	...	...	2.0	p2.3	2.6	3.0	2.8	2.9	2.9	2.8	2.8	2.5	1.8	...
21	...	...e	0.7	0.7	0.7	0.7	0.9	0.8	0.8	0.7	0.9	0.8	...	...	1.8	2.5	2.8	3.0	2.9	...a	2.9	2.9	2.7	2.3	2.0	...
22	...	...e	...e	...e	0.8	0.8	0.9	0.8	0.9	0.8	0.7	...e	...	...	1.8	2.4	2.7	3.0	3.0	2.8	2.8	2.8	2.8	2.5	p1.5	...
23	...	...e	...e	...e	...c	...c	p0.9	0.9	0.9	0.8	0.8	0.7	...	...	1.8	2.4	2.7	3.0	...c	p2.9c	2.9	2.9	2.8	2.7	2.5	...
24	...	...e	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	...e	...e	...	...	2.0	2.6	2.8	3.0	2.9	2.9	2.9	2.8	2.8	2.4	1.8	...
25	...	...e	0.7	0.8	0.9	0.8	0.9	0.9	0.8	p0.7	...e	...e	...	...	2.0	2.4	2.7	2.8	2.8	2.8	2.8	2.8	p2.6	2.7	1.8	...
26	...	...e	...e	0.7	0.7	0.8	0.8	0.7	0.7	...c	0.6	...e	...	...	1.9	2.4	2.8	3.0	3.2	3.1	3.1	3.0	...c	2.3	...a	...
27	...	0.7	0.7	0.6	0.8	0.8	0.7	p0.7	0.8	...c	...c	...c	...	...	1.8	2.4	2.7	2.9	3.0	3.1	p3.1	3.0	...c	...c	...c	...
28	...	...e	...e	...c	...c	...c	...c	0.7	0.6	0.6	...e	...	...	...	1.5	2.3	...c	...c	...c	3.1	3.1	3.2	2.7	2.2	...	...
29	...	...e	0.6	0.7	0.6	0.8	0.6	0.7	0.7	0.8	0.7	...e	...	...	1.7	2.3	2.7	2.9	3.0	3.1	3.0	2.8	2.8	2.3	...a	...
30	...	...e	0.6	0.5	0.7	0.6	0.7	0.7	0.7	0.6	0.7	...	...	...	1.5	2.4	2.7	2.8	3.0	3.0	3.0	2.8	2.6	2.3	...a	...
31																										
MEAN#	...	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	...	...	1.9	2.4	2.7	2.9	2.9	2.9	2.9	2.9	2.8	2.4	1.9	...

# = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 287

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — MAY 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.3	3.4	3.6	3.7	4.1	2.0	p2.0	4.0	4.8	6.0	7.0	7.3	6.9	6.5	6.3	7.3	6.4	5.4	4.5	2.3	2.4	3.0	3.0	2.9	4.5
2	p3.3	3.9	...c	...c	...c	3.6	...a	4.5	...c	5.0	...c	...c	...c	...c	...c	...c	...c	...c	3.7	2.4	2.8	3.0	2.7	2.5	...
3	...f	2.8	2.7	2.6	2.5	2.1	2.1	4.0	...c	5.4	5.6	p5.7	5.4	6.1	6.3	7.0	5.4	5.1	3.8	2.2	2.5	2.8	3.1	3.1	...
4	3.3	3.4	3.6	3.0	2.9	2.5	2.4	4.2	4.8	5.5	5.9	6.4	5.8	5.7	6.0	5.8	5.5	5.3	3.3	2.2	2.3	3.2	3.3	3.3	4.2
5	3.4	3.4	3.2	2.9	2.8	2.2	2.0	4.1	5.2	5.7	7.7	6.6	6.7	6.1	6.7	p7.3	6.8	5.4	4.2	...f	2.7	p3.1	3.1	2.9	...
6	3.2	3.1	p3.3c	3.4	p3.2	2.8	2.5	...c	4.6	...c	6.7	...c	...c	...c	6.3	7.3	6.8	5.2	3.7	2.3	2.6	2.6	2.2	2.3	...
7	2.7	2.8	2.8	3.0	3.5	...f	1.8	4.0	5.0	5.1	6.1	6.5	6.8	6.0	6.2	7.2	6.2	5.5	3.8	2.3	2.7	2.4	2.8	3.0	...
8	3.1	3.2	3.4	3.7	4.2	3.0	2.5	4.4	5.1	5.4	5.4	p7.1	6.4	5.6	6.5	6.6	6.1	5.6	3.7	2.3	2.3	2.6	2.9	3.0	4.3
9	2.9	3.0	3.1	3.4	3.6	2.9	2.5	4.0	4.8	5.5	6.1	5.9	6.0	6.3	5.9	5.9	5.8	4.7	3.4	2.4	2.6	2.7	2.5	2.8	4.1
10	3.0	3.2	3.1	3.2	3.4	2.8	2.3	4.0	5.1	5.5	5.5	...c	5.6	5.4	6.0	5.9	5.8	4.9	3.8	2.5	2.6	2.9	3.2	3.3	...
11	3.1	3.1	3.3	3.5	3.6	2.9	2.5	4.3	4.8	5.3	p6.0	5.8	5.6	5.2	6.0	6.4	6.2	4.7	2.7	2.1	2.6	3.0	2.8	2.9	4.1
12	...f	...f	3.2	2.3	2.4	2.6	1.9	4.0	5.0	5.2	6.0	5.7	5.6	p6.4	6.3	6.5	5.9	4.7	3.3	2.6	2.6	3.2	3.2	3.5	...
13	3.4	3.7	3.6	4.0	4.5	3.7	3.1	4.1	5.4	5.4	5.8	p6.1	6.3	6.6	7.3	6.3	...c	5.7	3.3	2.6	3.0	2.9	3.1	3.0	...
14	3.4	3.4	3.6	3.7	4.1	3.6	2.8	3.8	4.8	4.6	6.7	p5.5	5.6	6.0	6.3	6.4	6.2	5.1	3.8	3.1	2.4	2.2	2.7	2.9	4.2
15	2.7	3.2	3.4	3.5	3.6	3.2	3.3	4.4	5.2	p5.7	5.3	6.5	...c	5.3	6.1	...c	p7.0	4.6	3.4	3.5	3.2	3.3	3.3	3.3	...
16	3.4	3.9	3.9	3.7	4.2	3.5	3.1	4.1	4.7	5.2	5.5	5.6	5.5	5.5	6.2	6.3	5.6	4.7	3.2	2.1	2.3	2.3	2.4	2.8	4.2
17	2.9	3.2	3.5	3.6	4.0	3.1	2.8	4.1	...c	5.5	p6.2	...c	...c	5.5	6.0	5.7	5.4	5.3	3.4	3.0	3.3	...c	...c	3.6	...
18	3.4	3.8	3.5	3.5	3.3	2.6	2.5	...c	5.0	5.2	5.7	...c	...c	5.3	5.9	...c	...c	4.7	3.4	2.4	3.0	3.3	3.0	...a	...
19	3.1	3.4	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.8	5.7	6.1	6.0	5.5	5.3	3.3	3.0	2.7	3.2	3.1	3.6	...
20	4.0	4.0	4.1	4.1	4.5	3.8	3.4	4.3	5.0	5.9	5.6	5.7	5.6	5.3	6.0	5.9	5.3	4.8	2.9	3.1	3.4	3.7	3.6	3.6	4.5
21	4.0	3.8	4.3	4.3	4.4	4.1	2.3	3.8	4.5	4.9	5.3	5.1	5.4	5.8	5.1	5.1	p5.6c	...c	...c	...c	...c	...c	...c	...c	...
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	4.5	4.2	2.6	2.4	3.0	3.2	3.6	2.8	...
23	2.8	3.2	3.3	3.4	3.2	...f	...f	3.5	4.7	4.9	5.6	p5.1	6.0	5.3	5.5	6.2	6.2	5.1	2.9	3.0	3.5	3.5	3.9	3.5	...
24	3.8	...f	...f	2.7	2.9	2.2	p1.8	3.4	4.9	4.9	4.9	5.1	5.7	p5.7	p5.1	5.9	5.3	6.1	4.8	p3.7	...c	...c	2.9	p3.5	...
25	p2.7	3.7	p3.8	3.8	4.2	4.2	2.4	3.2	4.5	5.3	5.2	...c	...c	5.2	6.1	6.1	5.6	...c	3.1	...c	...c	3.6	...c	...c	...
26	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	p2.8	2.8	...
27	3.2	3.0	3.7	4.0	4.0	4.3	3.2	4.0	4.8	4.9	5.7	4.8	5.3	5.1	5.7	5.3	5.5	3.9	3.1	2.7	3.4	3.4	3.3	3.2	4.2
28	3.1	2.9	3.8	4.1	4.1	3.9	3.0	3.7	5.7	5.1	5.5	5.5	5.6	p5.2	p5.8	6.2	5.3	4.3	3.9	2.3	2.5	2.9	3.1	2.9	4.2
29	2.9	3.2	3.6	p3.5	...c	...c	...c	...c	...c	...c	5.4	6.4	4.8	6.1	5.6	5.4	5.2	4.6	4.5	3.4	2.8	1.9	2.5	2.6	...
30	3.0	3.7	3.1	3.0	3.2	2.9	2.4	3.9	4.8	5.3	5.9	6.3	6.3	5.5	5.3	5.5	6.1	5.2	3.8	2.9	3.2	2.8	3.0	3.1	4.2
31	3.5	3.0	2.9	3.2	3.4	2.6	2.5	...c	...c	...c	...c	5.8	5.8	5.5	6.1	5.5	6.1	4.9	2.8	3.1	2.6	2.9	3.0	3.0	...
MEAN*	3.2	3.4	3.4	3.4	3.6	3.1	2.5	4.0	4.9	5.3	5.9	5.9	5.8	5.7	6.0	6.2	5.8	5.0	3.5	2.7	2.8	3.0	3.0	3.0	4.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 288

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1944 — MAY 1944

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	245	240	250	250	205	200	195	215	235	270	265	245	265	250	255	260	230	240	230	...a	...a	p290	255	245	...
2	p290	260	...a	...a	...a	...a	...a	260	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	195	...a	260	...a	...a	...a	...
3	...a	235	...a	245	...a	...a	255	245	...c	250	270	p260	265	280	310	245	230	220	200	180	250	250	235	275	...
4	245	245	225	215	210	225	230	220	230	260	265	260	255	270	270	265	240	215	200	265	300	245	250	240	244
5	245	235	220	235	230	240	265	215	235	290	245	275	260	300	260	p265	240	215	220	...a	...a	p260	225	280	...
6	250	250	p260	215	p235	250	235	...c	...c	...c	p255	...c	...c	...c	285	260	230	215	200	220	270	235	220	275	...
7	...a	265	270	265	215	210	p250	230	240	260	265	265	270	270	315	260	240	225	205	220	230	275	250	245	...
8	265	265	230	230	210	210	260	230	230	270	285	p260	260	280	255	260	230	210	200	...a	...a	250	240	235	...
9	235	240	255	235	220	215	215	220	230	270	245	275	270	265	260	250	235	210	210	225	230	230	230	250	238
10	250	240	225	220	205	200	230	220	235	255	265	...c	270	270	p280	260	245	215	215	210	245	250	240	230	...
11	230	240	240	240	220	210	220	215	225	260	p250	260	270	320	285	255	220	215	210	305	245	230	265	230	244
12	...f	...f	215	195	235	225	210	220	220	255	275	300	280	p275	250	260	235	220	200	200	250	270	240	235	...
13	250	250	260	240	220	195	200	225	240	240	290	260	275	300	260	235	...c	220	210	...a	250	225	265	245	...
14	250	240	240	235	220	195	210	225	235	225	250	p280	275	285	295	260	250	225	210	210	215	285	235	195	239
15	250	245	260	220	210	210	215	220	245	260	280	270	...c	280	305	...c	p230	210	225	225	235	235	235	225	...
16	240	225	205	215	200	200	215	220	230	250	260	230	270	360	280	265	235	225	210	215	225	235	245	255	240
17	235	225	235	230	215	190	215	225	...c	270	p255	...c	...c	250	290	240	235	210	220	215	245	...c	...c	245	...
18	265	210	235	210	200	210	215	...c	230	235	275	...c	...c	...c	285	...c	...c	215	200	...a	240	240	...a	...a	...
19	260	275	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	255	255	280	245	225	210	210	210	265	215	220	225	...
20	240	225	240	245	215	195	200	215	225	250	250	245	275	310	255	245	230	200	230	230	215	220	215	210	232
21	220	210	230	215	225	215	190	210	225	250	255	p285	325	245	300	260	p240	...c	...c	...c	...c	...c	...c	...c	...
22	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	235	210	205	215	215	240	240	225	...
23	245	230	210	230	220	...f	...f	225	230	260	270	p280	270	300	300	280	245	205	240	220	200	240	220	265	...
24	270	255	240	235	200	190	p260f	175	240	245	270	270	...c	...c	...c	...c	...c	225	...c	260	...c	...c	225	p245	...
25	p240	255	p250	260	235	195	230	225	235	260	265	...c	...c	p320	260	255	265	...c	200	...c	...c	215	...c	...c	...
26	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	p230	225	...
27	230	p230	225	235	225	195	220	220	215	250	250	275	265	285	270	255	230	...a	225	275	240	230	230	210	...
28	210	225	230	220	225	215	200	235	230	245	265	260	250	p270	p280	240	250	235	200	255	245	230	235	225	236
29	245	250	220	p220	...c	...c	...c	...c	...c	...c	290	235	...a	245	...a	...a	245	235	235	210	220	180	200	230	...
30	260	235	265	260	240	235	220	230	225	260	255	250	235	255	235	265	240	220	210	235	205	235	235	230	239
31	235	220	220	215	210	225	225	...c	...c	...c	...c	...c	275	295	270	250	225	215	235	220	220	230	...a	...a	...
MEAN*	246	240	237	231	218	210	223	222	231	256	264	266	268	281	276	255	237	218	212	228	238	240	235	238	239

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 289

MAY 1944 — MAY 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.0	4.0	4.1	4.0	3.9	3.9	...	...	...
2	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
3	...	...	...	...	4.0	4.1	4.1	4.1	4.2	3.8	...	...	...
4	...	...	...	...	4.1	4.1	4.2	4.1	4.0	3.9	...	...	...
5	...	...	...	...	4.1	4.1	4.2	4.1	4.0	3.8	...	...	...
6	...	...	...	...	...c	...c	...c	4.3	4.1	3.7	3.3	...	...
7	...	...	...	...	4.0	4.1	4.1	4.0	4.1	3.8	...	...	...
8	...	...	...	...	4.1	4.1	4.1	4.2	4.0	3.8	...	...	...
9	...	...	...	...	4.0	4.0	4.2	4.0	4.0	3.7	...	...	...
10	...	...	...	...	4.0	...c	4.1	4.2	4.0	3.8	...	...	...
11	...	...	...	...	4.0	4.1	4.1	4.0	4.0	3.8	...	...	...
12	...	...	...	...	4.0	4.1	4.1	4.1	3.9	3.8	...	...	...
13	...	...	...	...	4.1	4.1	4.2	4.3	3.9	3.8	...	...	...
14	...	...	...	...	3.8	4.0	4.2	4.1	4.0	3.7	...	...	...
15	...	...	...	...	4.1	4.1	4.1	4.0	4.0	3.8	...	...	...
16	...	...	...	...	4.0	4.1	4.0	4.3	4.0	3.7	...	...	...
17	...	...	...	...	3.9	...c	...c	4.0	4.0	3.7	...	...	...
18	...	...	...	...	4.0	...c	...c	...c	4.0	...c	...	...	...
19	...	...	...	...	...c	...c	4.0	4.1	p4.0	3.7	...	...	...
20	...	...	...	...	3.9	4.1	4.1	4.2	3.9	3.7	...	...	...
21	...	...	...	...	4.0	4.1	4.2	4.1	4.1	3.7	...	...	...
22	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
23	...	...	...	...	4.0	4.0	4.0	4.0	4.0	3.9	...	...	...
24	...	...	...	...	4.0	...c	...c	...c	...c	...c	...	...	...
25	...	...	...	...	3.9	...c	...c	4.0	3.8	...c	...	...	...
26	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
27	...	...	...	...	4.0	4.0	4.0	4.0	4.0	...	...	...	...
28	...	...	...	...	3.9	4.0	4.0	4.0	3.7	3.6	...	...	...
29	...	...	...	...	4.0	4.0	...a	4.0	...a	...a	...	...	...
30	...	...	...	...	4.0	4.1	4.1	4.1	p3.8	...	...	...	...
31	...	...	...	...	...c	...c	4.0	4.0	3.9	3.6	...	...	...
* MEAN	...	...	...	...	4.0	4.0	4.1	4.1	4.0	3.8	3.3	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	220	...c	...c	...c	...c	...c	...	...	...
2	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
3	...	...	...	...	215	215	215	235	205	230	...	...	...
4	...	...	...	...	230	230	235	230	230	225	...	...	...
5	...	...	...	...	245	220	200	200	200	230	...	...	...
6	...	...	...	...	...	...c	...c	...c	205	230	p225	...	...
7	...	...	...	...	230	205	240	p215	215	200	...	...	...
8	...	...	...	...	240	230	215	225	220	200	...	...	...
9	...	...	...	...	220	185	230	235	225	225	...	...	...
10	...	...	...	...	255	...c	230	240	245	225	...	...	...
11	...	...	...	...	215	230	225	215	230	230	...	...	...
12	...	...	...	...	220	215	215	225	225	220	...	...	...
13	...	...	...	...	220	200	235	240	230	225	...	...	...
14	...	...	...	...	...h	230	255	220	210	255	...	...	...
15	...	...	...	...	225	220	210	190	...h	235	...	...	...
16	...	...	...	...	240	235	225	225	230	235	...	...	...
17	...	...	...	...	240	...c	...c	235	225	230	...	...	...
18	...	...	...	...	190	...c	...c	...c	210	...c	...	...	...
19	...	...	...	...	...c	...c	215	230	p200	215	...	...	...
20	...	...	...	...	230	230	215	215	200	210	...	...	...
21	...	...	...	...	225	210	210	235	200	220	...	...	...
22	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
23	...	...	...	...	225	220	235	215	255	240	...	...	...
24	...	...	...	...	p245	...c	...c	...c	...c	...c	...	...	...
25	...	...	...	...	230	...c	...c	p220	255	...c	...	...	...
26	...	...	...	...	...c	...c	...e	...c	...c	...c	...	...	...
27	...	...	...	...	235	220	...c	220	225	...	...	...	...
28	...	...	...	...	200	235	185	210	225	235	...	...	...
29	...	...	...	...	240	230	...a	...a	...a	...a	...	...	...
30	...	...	...	...	220	...c	235	...a	...a	...	...	...	...
31	...	...	...	...	...c	...c	225	250	250	...a	...	...	...
* MEAN	...	...	...	...	227	220	222	224	222	226	225	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 290

MAY 1944 | MAY 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...	...	1.4	2.3	2.6	2.7	2.7	2.7	2.8	2.8	2.6	2.6	2.6	...
2	...	...e	0.5	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...	...	2.4	2.4	2.6	...c	...c	...c	...c	...c	...c	...c	...c	...
3	...	...e	...e	0.7	0.7	0.8	0.7	0.9	1.0	0.9	0.8	...e	...	...	1.7	...c	2.7	2.7	2.8	2.8	2.7	2.8	2.6	2.3	1.9	...
4	...	...e	...e	...e	0.7	0.9	0.9	0.8	0.7	0.7	0.7	...e	...	...	1.9	2.7	2.6	2.8	3.0	3.0	3.0	2.9	2.7	2.3	1.8	...
5	...	...e	...e	...e	0.7	0.9	0.8	0.7	0.7	0.7	...e	...e	...	...	1.9	2.2	2.6	2.8	2.9	2.9	3.0	2.9	2.9	2.1	1.8	...
6	...	...	...c	...c	...c	...c	...c	...c	0.8	0.8	0.9	0.7	...	...	...	2.2	2.4	2.7	...c	...o	2.4	2.9	2.8	2.4	2.1	...
7	...	...e	...e	...e	0.7	0.8	0.9	0.8	0.8	0.8	0.7	...e	...	...	1.9	2.1	2.5	2.7	2.9	3.0	2.9	2.8	2.7	2.3	1.8	...
8	...	...e	0.7	0.7	0.9	0.9	0.9	0.9	...c	0.7	0.6	...e	...	...	...a	2.5	...a	2.9	2.9	2.9	2.6	2.8	2.8	2.3	1.7	...
9	...	...e	...e	0.7	0.8	0.8	0.9	0.9	0.9	0.7	...e	...e	...	...	2.1	2.3	2.7	2.7	2.8	2.7	2.8	2.8	2.7	2.3	1.7	...
10	...	...e	...e	0.8	0.7	...c	0.7	0.9	0.8	0.7	0.5	...e	...	...	1.9	2.2	2.6	2.8	...c	3.1	3.0	2.9	2.6	2.3	1.9	...
11	...	...e	...e	0.7	0.9	0.7	0.9	0.8	0.7	0.7	...e	...e	...	...	2.0	2.3	2.5	2.7	2.7	2.7	2.7	2.9	2.6	2.4	1.6	...
12	...	...e	0.5	...e	0.9	0.8	0.8	0.7	0.7	0.5	0.5	...e	...	...	1.8	2.4	2.7	2.7	2.7	2.8	2.7	2.7	2.7	2.2	1.8	...
13	...	...e	0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.7	...o	...e	...	...	1.9	2.4	2.7	2.7	2.6	2.8	2.7	2.8	2.7	...c	1.8	...
14	...	...e	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	...e	...	...	1.6	2.5	2.7	2.8	2.8	2.8	2.5	2.8	2.7	2.4	1.7	...
15	...	...e	0.5	0.5	0.6	0.8	0.7	0.7	0.7	...c	0.5	...e	...	...	1.7	2.3	2.8	2.8	2.8	3.0	3.0	2.8	2.7	2.5	1.7	...
16	...	...e	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.5	...e	...	...	1.8	2.6	2.6	2.8	2.9	3.0	3.0	2.8	2.6	2.4	1.7	...
17	...	...e	...c	0.5	0.6	...c	...c	0.8	0.8	0.6	0.5	...e	...	...	1.8	...c	2.7	2.9	...c	...c	2.8	2.9	2.7	2.4	1.5	...
18	...	...e	0.5	0.8	0.8	...c	...c	...c	0.8	...c	0.7	0.5	...	...	1.8	2.5	2.6	2.8	...c	...c	2.8	2.8	...c	2.4	p1.9	...
19	...	...c	...c	...c	...c	...c	0.8	0.8	0.8	0.8	0.6	...e	...	...	...c	...c	...c	...c	...c	3.0	2.8	p2.8	2.7	2.6	1.7	...
20	...	...e	0.5	0.6	...c	...c	0.8	0.8	0.8	0.6	0.5	...e	...	...	1.7	2.4	2.8	2.9	3.1	3.0	2.9	2.9	2.7	2.4	1.8	...
21	...	...e	0.5	...c	0.8	...c	...c	...c	...c	...c	...c	...c	...	...	1.8	2.4	2.7	2.8	2.9	2.9	3.0	2.9	2.7	2.5	...c	...
22	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	0.5	...e	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.2	1.9	...
23	...	...e	0.6	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.6	...e	...	...	1.5	2.4	2.8	2.8	2.8	3.1	2.9	2.8	2.7	2.2	1.4	...
24	...	...e	0.5	0.6	0.9	...c	...c	...c	...c	...c	...c	...	...	...	1.2	2.5	2.7	2.8	2.7	2.5	2.6	2.5	2.6	2.6	...	...
25	...	...e	0.6	0.6	0.8	...c	...c	0.8	0.9	0.9	0.8	...c	...	...	1.6	2.3	2.5	2.8	...c	...c	p2.8	2.7	2.5	2.4	...	...
26	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
27	...	...e	0.6	0.7	0.9	1.0	1.1	0.9	0.9	0.8	0.7	...a	...	...	1.7	2.3	2.5	2.7	3.0	2.9	3.0	2.7	2.4	2.1	...a	...
28	...	...e	0.7	0.8	0.8	1.0	1.0	1.0	0.7	0.6	...a	...a	...	...	1.7	2.1	2.6	2.8	2.8	3.0	2.9	2.7	2.7	...a	...a	...
29	...	...c	...c	...c	0.8	0.9	0.9	0.9	0.6	0.5	...e	...e	...	...	...c	...c	...c	2.7	2.9	...a	...a	...a	...a	2.5	2.0	...
30	...	...e	...e	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.7	...e	...	...	1.5	2.0	2.4	2.6	2.9	3.0	2.9	2.7	2.5	2.2	1.6	...
31	...	...c	...c	...c	...c	...c	0.8	0.8	0.8	0.8	0.9	0.7	...	...	...c	...c	...c	...c	p3.1	2.8	2.9	2.7	...a	2.7	1.7	...
MEAN*	...	0.5	0.6	0.7	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.5	...	...	1.8	2.4	2.6	2.8	2.2	2.9	2.8	2.8	2.7	2.4	1.8	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 291

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1944 | JUNE 1944

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.2	3.3	3.8	4.1	4.0	4.1	3.5	4.0	4.6	5.5	6.1	5.3	5.6	5.5	6.4	4.8	5.6	5.0	2.9	2.5	3.3	3.6	3.6	3.4	4.3
2	3.6	3.7	3.9	3.0	3.0	2.6	2.0	3.5	4.6	5.0	5.2	5.1	5.7	p5.8	6.1	5.8	5.5	5.2	3.3	2.5	2.8	3.0	3.1	p2.8f	4.0
3	2.6	3.2	3.4	3.7	3.8	3.9	3.2	3.8	5.2	5.0	p6.2	...c	...c	5.5	...c	5.4	6.2	p4.3	p2.9	2.4	2.4	3.4	3.4	2.5	...
4	2.5	3.3	3.4	3.8	3.8	3.3	3.3	4.7	4.5	5.1	5.2	...c	4.9	...c	...c	5.6	5.5	4.5	3.0	2.4	3.1	3.5	3.0	3.6	...
5	3.8	3.9	4.1	4.1	4.3	4.1	4.1	4.3	4.7	...c	4.7	5.8	5.6	5.9	...c	5.4	5.9	5.3	4.0	3.5	3.1	3.1	2.9	3.0	...
6	3.2	3.1	3.4	3.7	4.1	3.0	2.6	3.5	4.8	4.8	5.2	5.6	5.7	6.0	6.3	4.9	6.3	5.4	3.1	3.1	2.9	3.6	3.5	3.0	4.2
7	3.5	3.6	3.9	4.4	4.7	4.4	...c	4.3	4.4	5.1	5.7	p5.8	4.9	5.4	...c	...c	5.7	5.0	3.6	4.2	3.6	4.3	4.2	4.3	...
8	3.9	4.5	5.1	5.5	5.1	5.2	4.3	4.3	4.6	p5.5	5.3	5.1	5.3	5.3	5.3	5.4	5.8	4.8	3.7	2.8	2.9	2.7	2.6	2.0	4.5
9	2.5	2.9	3.0	3.3	3.4	3.0	2.1	3.2	4.8	5.0	5.7	5.5	6.1	4.8	5.8	5.7	5.5	4.8	3.1	2.3	2.7	3.1	3.4	3.0	4.0
10	3.1	2.7	2.7	2.5	2.6	2.1	1.9	3.4	4.7	5.0	5.0	5.0	5.3	5.6	5.3	5.9	5.9	5.7	3.2	2.7	3.1	2.5	2.6	2.9	3.8
11	3.1	3.2	3.4	3.2	3.4	3.2	3.1	4.1	4.7	4.9	4.9	5.0	5.7	5.4	5.2	5.4	5.5	5.4	3.2	2.9	3.4	3.4	3.2	3.7	4.1
12	3.7	4.1	4.3	4.3	3.8	3.8	3.8	3.4	4.9	4.7	6.0	4.3	6.2	5.3	5.2	5.5	5.4	4.6	3.6	3.2	3.0	2.9	3.1	3.5	4.3
13	3.6	3.2	4.0	4.2	4.5	4.3	3.9	4.0	5.2	5.0	4.9	5.0	5.2	5.4	5.0	5.5	4.7	4.8	3.3	2.5	3.2	3.0	2.6	2.9	4.2
14	3.3	3.1	3.8	3.4	3.5	3.9	3.8	4.8	4.9	5.1	5.3	5.8	5.5	6.0	5.2	5.5	5.1	5.0	3.8	2.9	3.0	3.6	3.9	4.2	4.4
15	4.0	3.5	3.2	3.2	3.4	3.1	2.4	3.4	5.2	5.5	5.7	5.9	5.9	6.0	6.3	5.9	5.3	5.1	3.5	2.5	2.5	2.7	2.7	2.9	4.2
16	3.5	3.6	2.9	2.9	3.7	2.9	2.3	3.4	4.7	5.3	...c	...c	...c	5.5	5.5	5.3	4.9	5.4	3.7	2.8	p2.6	...c	...c	...c	...
17	3.0	2.6	2.7	2.7	3.0	2.8	2.8	4.1	4.7	4.8	5.8	5.8	5.5	5.8	5.3	5.8	5.2	5.8	3.3	2.9	2.6	2.7	2.4	2.7	4.0
18	3.4	3.4	3.1	3.3	3.8	3.2	2.9	3.1	4.8	5.2	5.3	p5.8	5.9	5.7	5.7	5.5	5.3	4.9	3.3	2.7	3.5	3.7	3.5	3.3	4.2
19	3.4	3.5	3.6	3.6	...f	3.6	3.0	3.5	4.8	4.6	5.1	5.2	5.5	5.0	5.8	5.8	5.0	4.8	2.5	2.8	3.3	3.6	...f	...f	...
20	3.5	3.0	3.0	3.3	3.0	2.8	2.7	3.1	4.6	4.6	5.5	5.5	6.0	5.6	5.1	5.5	5.7	4.3	4.1	3.0	2.8	3.3	3.7	3.7	4.1
21	3.7	4.0	4.2	4.5	5.3	3.3	3.2	3.5	4.9	5.1	5.5	5.9	5.3	4.9	5.5	7.5	5.3	5.2	3.2	2.7	3.3	3.0	3.4	3.6	4.4
22	3.9	4.2	4.1	3.9	4.1	3.7	3.0	3.6	4.6	5.1	5.6	5.5	p5.8	5.2	5.6	6.2	6.1	p5.7	2.7	3.1	2.0	2.4	3.0	2.6	4.3
23	3.3	3.7	3.8	3.7	4.2	3.7	2.2	3.5	4.3	5.3	p6.3	5.0	5.6	4.9	5.6	6.5	p5.2	4.9	2.9	2.8	3.0	3.8	3.5	3.6	4.2
24	3.9	4.4	4.7	4.8	4.5	4.1	2.4	2.9	4.6	5.3	5.1	5.8	4.6	5.2	5.7	5.0	6.2	p5.5	2.9	2.0	2.1	2.7	2.3	2.0	4.1
25	2.3	2.5	2.7	2.8	2.7	2.1	1.7	3.0	4.5	4.7	5.0	5.6	4.8	5.4	5.1	5.5	5.1	4.3	2.8	2.4	2.4	2.8	3.3	2.8	3.6
26	2.5	3.0	3.5	3.5	3.5	3.1	2.5	3.0	4.8	4.9	5.0	5.2	5.1	p5.7	5.8	6.2	5.2	4.6	3.3	2.2	2.7	...c	...c	...c	...
27	3.1	3.7	2.9	3.3	3.1	3.0	2.2	2.7	4.6	5.2	5.1	5.2	5.1	5.4	6.7	5.3	5.3	3.9	3.1	2.9	3.6	3.4	3.2	3.7	4.0
28	3.3	3.4	3.3	...f	...f	3.3	3.7	4.3	5.0	4.7	5.0	5.2	5.2	6.0	6.2	5.4	4.7	4.4	3.3	2.8	2.5	2.7	2.7	3.3	...
29	3.1	3.3	3.3	3.9	3.3	2.9	2.2	3.0	4.5	5.3	5.2	5.1	...c	5.2	6.0	5.2	p5.1	5.1	2.7	2.4	2.6	3.0	3.3	3.3	...
30	3.1	2.8	3.2	3.1	2.6	2.1	2.0	3.4	4.6	4.9	4.8	4.9	5.5	5.0	4.7	...c	4.4	4.9	4.2	2.9	2.9	2.5	2.7	p2.7f	...
31																									
MEAN*	3.3	3.4	3.6	3.6	3.7	3.4	2.9	3.6	4.7	5.0	5.4	5.4	5.5	5.5	5.6	5.6	5.4	5.0	3.3	2.8	2.9	3.1	3.1	3.2	4.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 292

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1944 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JUNE 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	235	255	260	225	230	215	190	220	240	270	250	295	255	320	265	225	245	215	200	235	230	230	230	230	240
2	260	250	225	230	225	195	185	225	215	265	265	270	260	p290	265	240	235	195	200	220	225	285	240	p230f	237
3	250	245	275	...a	240	210	215	210	220	250	p265	...c	...c	245	...c	290	235	p200	p195	200	235	240	225	215	...
4	255	260	250	230	220	195	220	p200	205	245	p235	...c	300	...c	...c	250	250	215	200	195	240	220	230	235	...
5	220	225	230	235	220	215	210	220	230	...c	245	265	235	270	...c	280	...a	210	210	210	210	220	230	230	...
6	240	245	240	235	215	195	250	225	240	240	280	270	280	240	260	245	235	215	205	200	200	250	230	...a	...
7	245	245	230	215	225	210	...c	235	220	245	255	p240	260	p290	295	...c	235	220	240	240	220	225	...a	220	...
8	265	255	235	225	220	205	200	205	220	p230	270	300	275	330	270	270	235	220	200	200	220	230	215	240	239
9	245	...a	240	230	205	220	230	220	225	240	255	275	255	270	280	240	225	210	...a	...a	245	250	230	220	...
10	255	250	230	210	220	200	...a	...a	230	260	265	265	305	280	315	260	255	220	190	275	...a	270	245	235	...
11	260	260	...a	230	240	220	210	215	220	245	300	290	265	340	265	260	245	220	215	235	220	220	190	230	...
12	225	240	235	210	250	230	200	225	215	245	255	255	260	265	300	265	235	220	220	210	230	210	215	235	235
13	215	220	235	220	220	220	205	220	230	240	255	280	265	270	330	275	255	220	200	295	230	230	215	230	241
14	225	200	235	230	250	245	240	225	215	250	360	270	285	275	280	275	230	220	215	210	195	235	265	240	245
15	220	230	235	240	230	220	200	230	235	240	275	275	275	260	230	250	235	...a	220	...a	...a	270	250	270	...
16	260	235	...a	250	215	210	230	250	235	255	...c	...c	...c	...a	275	240	250	230	210	240	p200	...c	...c	...c	...
17	245	250	250	230	240	220	230	220	230	225	275	265	245	280	...a	250	...a	205	...a	...a	225	215	240	255	...
18	240	230	235	250	210	190	200	255	245	260	285	p285	250	270	275	260	235	215	195	250	220	230	240	270	241
19	250	245	245	245	210	225	205	...a	230	235	280	275	265	275	275	245	240	220	...a	...a	...a	255	245	245	...
20	240	230	230	225	220	215	200	225	235	245	275	260	265	270	260	270	245	230	...a	225	230	245	255	235	...
21	230	225	225	210	200	180	220	235	235	240	275	255	265	275	275	245	240	220	185	230	240	225	240	245	234
22	250	230	230	235	215	210	195	230	230	245	255	255	p245	335	275	260	240	p215	...a	250	...a	...a	240	225	...
23	235	235	230	245	235	205	230	225	235	255	p250	275	260	300	275	250	p230	p205	190	200	...a	245	240	230	...
24	230	260	230	230	215	210	245	230	240	240	270	280	270	305	260	325	250	...a	...a	...a	...a	240	215	260	...
25	260	245	260	240	220	200	240	230	230	225	270	270	280	275	300	300	245	210	215	...a	225	235	220	210	...
26	235	235	240	250	230	195	230	215	225	245	280	255	325	p270	295	255	220	215	220	...a	235	...c	...c	...c	...
27	215	215	225	235	230	180	230	220	250	250	275	295	280	295	245	245	240	225	230	...a	...a	265	205	200	...
28	235	230	230	215	215	240	205	230	225	240	280	285	270	270	275	260	240	220	205	205	235	260	...a	275	...
29	265	245	...a	...a	215	215	215	220	240	260	250	270	...c	330	...a	270	...a	220	...c	...c	...c	...c	...c	260	...
30	225	220	235	235	200	200	...a	230	200	265	320	300	270	...a	245	...c	230	230	210	205	200	220	285	p260f	...
31																									
* MEAN	241	238	238	231	223	210	216	225	228	246	271	273	269	285	277	261	239	216	207	225	223	239	233	238	240

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 293

JUNE 1944 | JUNE 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.0	4.1	4.1	3.9	3.8	...	...	...	...
2	...	...	...	...	4.0	4.1	4.1	p4.0	4.0	...	...	...	...
3	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
4	...	...	...	...	3.8	...c	4.1	...c	...c	3.6	...	...	...
5	...	...	...	...	...	3.9	4.1	3.9	...c	3.7	...	...	...
6	...	...	...	...	4.0	p3.9	4.0	4.0	3.9	...	...	...	...
7	...	...	...	...	3.9	p4.0	4.0	p4.0	p4.0	3.6	...	...	...
8	...	...	...	...	...	4.0	p4.1	4.3	4.0	...	...	...	...
9	...	...	...	...	3.9	4.0	4.1	4.1	4.0	...	...	...	...
10	...	...	...	...	3.9	4.1	...a	...a	3.9	3.7	...	...	...
11	...	...	...	...	4.0	4.0	4.1	4.1	4.0	...	...	...	...
12	...	...	...	...	4.0	...a	4.0	4.0	3.9	...	...	...	...
13	...	...	...	...	3.8	4.1	4.0	4.1	4.0	3.8	...	...	...
14	...	...	...	p3.6	p4.6	4.1	4.1	4.0	3.9	3.9	...	...	...
15	...	...	...	...	4.0	4.0	4.0	4.0	...a	...a	...	...	...
16	...	...	...	...	...c	...c	...c	...c	3.8	...	...	...	...
17	...	...	...	...	4.0	4.0	4.1	3.9	...a	...	...	...	...
18	...	...	...	...	4.0	4.2	4.1	4.0	4.0	...	...	...	...
19	...	...	...	...	4.0	4.0	4.0	4.0	3.8	...	...	...	...
20	...	...	...	...	4.0	4.0	4.1	4.0	3.8	...	...	...	...
21	...	...	...	...	3.9	4.0	4.1	4.1	4.0	3.7	...	...	...
22	...	...	...	...	3.8	3.9	p3.9	4.3	3.9	...	...	...	...
23	...	...	...	...	3.8	4.0	4.0	3.8	p3.7	3.9	...	...	...
24	...	...	...	...	3.8	4.0	3.9	4.0	3.8	3.7	...	...	...
25	...	...	...	...	3.8	4.0	4.1	3.9	3.8	3.8	...	...	...
26	...	...	...	...	3.8	3.9	4.0	p4.0	3.7	...a	...	...	...
27	...	...	...	...	3.8	3.9	4.0	4.0	3.9	3.6	...	...	...
28	...	...	...	...	3.8	3.9	4.0	...a	3.7	...	...	...	...
29	...	...	...	...	3.8	4.0	...c	4.0	4.0	3.6	...	...	...
30	...	...	...	...	4.1	4.0	...a	...a	3.9	...c	...	...	...
31													
* MEAN	...	...	...	3.6	3.9	4.0	4.0	4.0	3.9	3.7	...	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	240	210	220	185	...h	...	...	...	...
2	...	...	...	...	235	220	235	p230	255	...	...	...	...
3	...	...	...	...	...c	...c	...c	...c	...c	...	...	...	...
4	...	...	...	...	p220	...c	230	...c	...c	245	...	...	...
5	...	...	...	...	...	225	220	250	...c	...h	...	...	...
6	...	...	...	...	245	...a	265	...a	260	...	...	...	...
7	...	...	...	...	240	p250	215	p245	p235	240	...	...	...
8	...	...	...	...	...	225	p245	235	205	...	...	...	...
9	...	...	...	...	230	...h	...a	225	190	...	...	...	...
10	...	...	...	...	235	210	...a	...a	200	230	...	...	...
11	...	...	...	...	200	200	245	215	245	...	...	...	...
12	...	...	...	...	...a	...a	...a	200	200	...	...	...	...
13	...	...	...	...	205	...a	215	225	...a	220	...	...	...
14	...	...	...	p175	...a	240	...a	...a	...a	...a	...	...	...
15	...	...	...	...	250	210	210	...a	...a	...a	...	...	...
16	...	...	...	...	...c	...c	...c	...c	215	...	...	...	...
17	...	...	...	...	225	235	210	195	...a	...	...	...	...
18	...	...	...	...	225	235	250	225	230	...	...	...	...
19	...	...	...	...	175	235	240	220	275	...	...	...	...
20	...	...	...	...	260	245	235	230	190	...	...	...	...
21	...	...	...	...	245	240	225	220	...a	245	...	...	...
22	...	...	...	...	...a	245	220	215	220	...	...	...	...
23	...	...	...	...	230	245	230	190	p185	255	...	...	...
24	...	...	...	...	235	225	200	225	...a	230	...	...	...
25	...	...	...	...	235	230	230	200	210	175	...	...	...
26	...	...	...	...	230	210	225	p255	240	...a	...	...	...
27	...	...	...	...	240	245	245	230	...a	225	...	...	...
28	...	...	...	...	...h	245	225	...a	220	...	...	...	...
29	...	...	...	...	...a	...a	...c	210	...a	200	...	...	...
30	...	...	...	...	...h	...a	...a	...a	...a	...c	...	...	...
31													
* MEAN	...	...	...	...	230	230	229	221	220	226	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 294

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.7	...e	0.8	0.9	0.8	0.9	0.7	0.7	0.5	...	...
2	...	...e	0.5	0.6	0.8	0.8	0.9	0.9	0.8	0.7	0.7	...	...
3	...	...e	0.7	0.7	0.8	...c	...c	0.8	0.8	0.8	0.8	...	...
4	...	...e	0.7	0.7	0.7	...c	...c	...c	...c	0.6	...e	...	...
5	...	...e	0.5	...c	...c	0.7	...a	...a	...c	0.7	...a	...	...
6	...	...e	0.7	0.7	p0.7	p0.7	0.8	0.8	0.7	0.7	0.7	...	...
7	...	...e	0.7	0.7	0.7	0.7	1.0	1.0	p0.8	0.7	0.5	...	...
8	...	...e	0.7	p0.7	0.8	0.8	p0.7	0.9	0.7	0.5	...e	...	...
9	...	...e	0.7	0.7	1.0	1.0	1.0	0.8	0.7	0.7	...	...	...
10	...	...a	0.7	0.7	1.0	0.9	0.7	0.9	0.9	0.9	0.8	...	...
11	...	...e	0.7	0.9	0.9	1.0	0.9	0.9	0.9	0.7	0.7	...	...
12	...	...e	0.7	0.8	1.0	0.9	0.9	0.8	0.8	0.7	0.6	...	...
13	...	...e	0.7	0.7	0.9	0.9	0.8	0.8	0.8	0.8	0.8	...	...
14	...	...c	...c	...c	...c	0.8	0.8	0.8	0.8	0.8	0.8	...	...
15	...	...e	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...	...
16	...	...e	0.8	...c	...c	...c	...c	...c	0.8	0.9	0.8	...	...
17	...	...e	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.8	...	...
18	...	...e	0.7	p0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...	...
19	...	...e	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.6	...	...
20	...	...e	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7	...	...
21	...	...e	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	...	...
22	...	...e	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.6	0.8	...	...
23	...	...e	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.7	p0.7	...	...
24	...	...e	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...e	...e	...	...
25	...	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.5	...	...
26	...	...e	0.5	0.8	0.8	0.9	0.8	p0.8	0.8	0.8	0.7	...	...
27	...	...e	0.6	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.7	...	...
28	...	...e	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	...	...
29	...	...e	0.8	0.8	0.9	0.8	...c	1.0	0.8	0.8	...a	...	...
30	...	...e	...c	0.8	0.8	0.8	0.8	0.8	0.8	...c	0.8	...	...
31													
MEAN*	...	0.5	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.7	...	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.8	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.7	2.1	...	...
2	...	1.7	2.0	2.4	3.0	2.9	2.9	2.8	2.8	2.5	2.1	...	...
3	...	1.3	2.4	2.7	2.9	...c	...c	2.7	2.7	2.7	2.2	...	...
4	...	p1.8	2.6	2.5	2.8	...c	3.3	...c	...c	2.5	1.9	...	...
5	...	1.7	2.0	...c	...c	2.8	...a	...a	...c	2.7	...a	1.6	...
6	...	1.9	2.4	2.5	p2.9	p2.8	2.9	2.9	2.8	2.3	2.2	...	...
7	...	1.4	2.2	2.5	2.8	2.9	3.1	3.0	p2.8	2.4	2.1	...	...
8	...	1.7	2.2	p2.4	2.9	2.3	p2.7	2.9	2.8	2.8	2.5	...	...
9	...	1.6	2.0	2.5	2.9	2.9	3.0	2.9	2.8	2.7	...	...	...
10	...	...a	1.9	2.4	2.7	2.8	2.9	2.8	2.8	2.7	2.1	...	...
11	...	1.4	2.3	2.5	2.8	2.9	2.7	2.8	3.0	2.6	2.5	...	...
12	...	1.5	2.2	2.6	2.8	3.0	2.8	3.0	2.8	2.9	2.1	1.7	...
13	...	1.2	2.2	2.4	2.7	2.9	3.0	2.8	2.6	...a	...a	1.5	...
14	...	1.5	2.3	2.4	p3.0	2.9	2.9	2.8	...a	...a	2.1	...a	...
15	...	1.5	2.0	2.5	2.8	2.8	2.6	2.9	2.7	2.5	2.0	...a	...
16	...	1.5	2.1	2.3	...c	...c	...c	2.8	2.5	...a	...a	...a	...
17	...	1.5	2.0	2.6	2.8	2.9	3.0	2.8	...a	2.8	...a	...	...
18	...	1.4	2.0	2.5	2.7	2.9	2.9	2.7	2.8	2.5	2.2	1.4	...
19	...	...a	2.2	2.5	2.7	2.8	2.9	2.7	2.8	2.6	2.3	...	...
20	...	1.5	2.0	2.9	2.8	2.8	3.0	2.8	2.8	2.6	2.3	...	...
21	...	1.6	2.3	2.3	2.7	2.8	2.9	2.8	2.7	2.6	2.2	1.5	...
22	...	1.5	1.8	2.8	2.7	2.8	2.9	2.7	2.7	2.4	2.0	1.7	...
23	...	1.5	2.4	2.3	2.7	2.8	2.8	2.7	2.7	2.5	p2.0	1.5	...
24	...	1.5	2.1	2.5	2.7	2.8	2.8	2.9	2.6	2.3	2.0	...a	...
25	...	1.5	2.4	2.4	2.6	2.8	2.9	2.8	2.7	2.5	2.4	...	...
26	...	1.5	2.1	2.5	2.8	2.8	2.8	2.9	2.8	2.6	2.2	1.6	...
27	...	1.5	2.1	2.3	2.7	2.7	3.0	2.8	2.7	2.6	2.0	1.7	...
28	...	1.1	1.9	2.3	2.5	2.8	2.8	2.7	2.7	2.7	2.1	1.7	...
29	...	1.6	1.9	2.4	2.8	3.1	...c	2.9	2.8	2.6	...a	...a	...
30	...	1.3	2.0	...a	2.7	...a	2.8	2.8	2.8	...c	2.1	1.7	...
31													
MEAN*	...	1.5	2.2	2.5	2.8	2.8	2.9	2.8	2.8	2.6	2.2	1.6	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = $f^{o}F2$ EQUAL TO OR LESS THAN $f^{o}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 295

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1944 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND JULY 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.7	3.0	2.9	3.1	3.3	3.1	p2.4f	3.2	4.2	4.8	p5.6	4.8	5.1	5.8	5.0	5.0	5.0	4.3	2.8	2.2	2.5	2.8	2.6	2.4	3.7
2	2.5	2.7	...f	2.5	2.7	2.4	2.0	3.1	4.7	5.1	5.0	5.1	5.3	4.8	5.0	5.4	4.8	4.4	3.0	2.1	2.6	2.7	2.6	2.7	...
3	2.7	3.0	3.0	3.1	3.5	2.9	2.4	3.2	4.4	4.7	p4.6	5.1	5.0	4.9	5.6	4.6	5.0	4.8	2.4	2.5	2.5	2.8	3.0	3.0	3.7
4	3.0	2.9	3.1	2.9	3.4	2.6	2.1	3.1	4.3	4.6	5.1	4.8	4.9	5.0	p6.1	5.4	5.3	4.4	3.1	2.9	2.6	2.9	3.1	2.8	3.8
5	2.5	2.5	...f	2.7	3.3	2.5	2.8	3.6	4.7	4.8	5.0	4.7	4.6	p4.9	4.5	5.0	5.6	5.0	2.9	2.5	3.0	3.5	3.8	3.5	...
6	3.5	3.4	...f	...f	3.0	2.2	...f	3.6	4.3	p4.5	4.5	4.9	4.6	5.3	4.6	5.5	4.8	p4.9	p2.7	2.7	2.8	2.6	2.5	2.8	...
7	2.5	2.6	3.0	3.4	3.6	3.0	3.4	3.0	4.3	4.8	4.8	4.9	4.5	5.2	7.2	5.2	4.9	4.2	3.9	2.8	2.8	3.5	3.8	3.3	3.9
8	3.0	2.8	3.4	3.6	2.8	...f	2.5	3.0	4.6	4.8	3.5	5.0	6.4	...c	...c	...c	...c	...c	...c	2.1	...c	2.6	2.6	2.8	...
9	3.0	3.3	3.5	...f	3.3	2.8	2.0	3.2	4.4	4.2	5.5	5.5	5.0	5.1	5.3	5.0	5.7	6.0	p4.0	2.6	2.7	2.4	3.5	3.8	...
10	3.2	3.3	2.8	3.0	3.0	...f	2.2	3.3	4.2	p5.3	5.3	4.8	4.4	5.4	4.8	5.6	5.1	4.3	3.1	2.5	2.7	3.0	p3.3	p3.1	...
11	2.7	2.5	...f	2.9	2.8	2.1	1.9	3.3	4.5	5.3	p5.5	...c	5.5	5.0	5.0	...c	...c	4.2	3.1	3.0	2.7	2.9	3.5	3.3	...
12	2.9	2.8	3.2	3.2	3.0	2.7	...f	3.7	4.7	5.2	5.0	p6.0	5.6	5.2	5.6	4.9	5.0	4.5	4.2	3.3	3.8	4.0	3.8	3.2	...
13	2.9	3.0	3.1	3.4	3.2	3.2	3.5	3.4	4.5	4.6	4.7	5.4	4.6	5.1	5.2	6.0	p5.5a	4.7	3.7	3.0	3.3	3.6	3.7	3.9	4.0
14	3.7	3.7	3.9	4.2	4.0	4.0	3.0	3.4	4.6	5.6	5.5	5.1	4.8	5.3	5.1	6.2	4.5	4.6	4.7	2.5	2.3	2.5	3.4	3.0	4.2
15	3.0	2.8	3.0	2.9	2.7	2.6	...f	3.2	4.3	4.5	5.3	...c	4.4	6.0	4.9	5.4	5.5	4.2	4.1	3.4	2.6	2.8	3.4	3.3	...
16	3.4	3.3	3.0	3.3	3.3	3.6	3.1	3.8	5.0	4.7	5.0	4.9	5.0	4.6	5.4	5.1	5.6	4.2	4.0	2.5	2.7	3.5	3.8	3.6	4.0
17	3.5	3.9	4.2	3.5	3.4	3.1	2.8	3.6	4.0	5.5	4.9	4.9	5.3	5.9	5.5	5.3	5.6	4.6	3.0	2.8	2.7	2.8	2.8	3.3	4.0
18	3.0	3.0	3.1	3.0	2.7	2.5	2.3	3.2	4.8	p5.0c	5.2	4.9	5.4	5.0	4.8	4.9	5.2	p4.3	3.3	2.1	2.3	2.3	2.6	2.6	3.6
19	2.4	2.3	2.5	2.4	2.4	2.3	1.9	3.2	4.5	5.7	...c	...c	...c	4.9	...c	...c	...c	...c	4.0	3.2	3.2	2.6	3.1	3.1	...
20	2.9	3.0	3.2	3.6	3.5	3.1	2.8	3.5	4.5	4.7	5.0	5.4	6.3	4.8	5.4	6.0	4.6	4.0	4.2	4.2	4.1	3.7	3.6	3.5	4.2
21	3.1	3.4	3.2	3.9	3.8	3.4	3.9	3.7	4.6	4.7	5.6	5.9	5.0	4.5	4.7	6.0	5.0	5.2	3.9	3.0	3.6	3.2	3.1	3.8	4.2
22	3.1	2.8	3.1	2.3	2.3	2.3	1.8	3.4	4.5	5.1	5.0	5.8	4.9	5.8	4.9	5.7	4.7	4.6	3.6	2.5	2.2	3.1	2.9	2.6	3.7
23	2.6	3.0	3.1	3.6	3.8	3.4	3.0	3.8	4.8	5.0	5.0	5.0	5.8	4.9	5.7	5.4	4.8	4.4	2.9	2.8	3.0	2.8	2.9	2.8	3.9
24	3.3	2.8	3.3	2.5	2.6	2.7	2.0	3.2	4.4	4.6	4.6	p4.8c	p5.1c	5.3	5.3	4.6	4.8	4.3	2.8	2.9	2.6	2.8	3.1	3.0	3.6
25	3.0	3.1	3.2	3.2	3.5	3.0	2.5	3.1	4.3	...c	...c	5.1	5.2	5.2	5.3	5.3	5.5	4.3	3.1	2.1	2.2	2.5	2.9	3.2	...
26	3.0	2.4	2.4	2.6	2.4	1.7	1.7	3.1	4.7	4.3	5.0	6.7	5.2	5.4	...c	5.6	...c	4.5	3.2	2.2	2.2	2.2	2.7	2.6	...
27	2.7	2.9	3.0	3.3	2.9	2.5	2.2	3.3	4.3	4.6	p4.9	p5.2	5.5	6.0	4.8	4.5	5.4	4.9	3.2	2.3	2.7	3.2	3.4	3.4	3.8
28	3.1	3.3	3.4	3.1	3.0	2.6	2.3	p2.6	4.9	4.7	5.0	5.6	5.7	5.7	5.4	...c	4.8	4.9	4.2	2.4	2.4	2.7	2.7	2.7	...
29	2.7	2.8	3.2	3.4	3.6	2.5	2.3	3.3	4.1	4.6	4.8	5.3	5.3	4.6	5.4	5.3	5.3	4.4	3.8	2.9	2.4	2.4	2.8	3.2	3.8
30	3.3	2.5	2.8	2.8	2.8	2.6	2.3	3.0	4.8	4.6	...c	...c	...c	5.2	5.4	5.0	5.4	4.1	4.0	2.9	2.7	2.9	3.4	...f	...
31	2.9	2.9	2.9	3.3	3.4	3.1	3.0	3.9	4.3	4.7	4.9	5.6	5.5	5.6	5.4	5.2	5.2	4.9	4.3	3.8	3.6	3.9	4.1	4.3	4.2
MEAN*	3.0	3.0	3.1	3.1	3.1	2.8	2.5	3.3	4.5	4.8	5.0	5.2	5.2	5.2	5.3	5.3	5.1	4.6	3.5	2.7	2.8	2.9	3.2	3.2	3.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 296

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1944 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JULY 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	265	240	225	205	200	p240f	230	225	240	p275	280	300	260	260	260	230	215	220	260	225	200	210	235	240
2	220	240	220	215	230	210	220	235	220	240	265	320	265	360	275	265	225	210	...a	200	210	225	230	230	...
3	230	225	245	270	230	215	210	230	245	250	p250	300	300	310	300	250	240	210	220	220	200	230	240	260	245
4	235	225	210	230	210	190	245	210	225	265	275	270	270	300	p290	245	230	210	250	220	220	220	235	250	239
5	255	250	215	250	200	200	215	220	230	245	270	300	280	p290	265	320	230	220	200	...a	240	250	235	240	...
6	225	245	200	250	200	200	225	210	230	p265	245	270	...	265	330	270	230	p215	p200	210	220	200	230	225	...
7	215	240	240	230	200	210	200	215	230	240	280	325	340	345	240	210	230	...a	...a	...a	...a	245	240	250	...
8	230	230	230	220	220	210	210	235	220	240	265	280	270	...c	...c	...c	...c	...c	...c	...c	...c	220	235	260	...
9	280	225	...a	250	225	210	230	225	235	230	300	270	300	...	...a	...c	275	220	p210	230	210	280	230	250	...
10	...a	235	220	...a	240	...a	200	200	205	p280	265	...a	285	350	...a	290	250	205	215	210	200	235	p240	p210	...
11	250	250	250	240	220	240	230	225	230	240	p285	275	280	260	245	...c	...c	225	220	240	...a	...a	...a	230	...
12	220	240	230	210	220	210	...a	220	220	210	295	p265	255	...c	320	280	280	210	220	245	210	240	210	220	...
13	250	240	230	225	...a	230	220	195	210	235	...c	290	...a	340	275	210	...a	240	210	...a	235	200	215	230	...
14	220	250	240	220	230	200	200	230	220	255	270	350	270	290	300	250	215	200	210	195	250	240	225	220	240
15	230	260	250	255	270	230	190	210	215	230	250	...c	300	260	300	270	245	210	210	210	225	270	220	240	...
16	235	225	220	220	250	240	210	250	235	225	255	285	300	225	260	275	220	220	210	240	230	230	225	270	240
17	235	245	215	205	210	220	225	205	225	250	300	320	270	280	265	270	230	200	p205a	p210a	215	215	p220a	230	236
18	265	240	220	225	205	200	225	220	230	...c	...c	...a	300	250	350	270	250	p215	220	...a	...a	...a	220	240	...
19	245	245	230	220	250	195	215	225	200	p235c	...c	...c	...c	...c	...c	...c	...c	...c	...a	220	220	240	220	220	...
20	240	245	240	220	220	195	220	235	235	370	300	300	250	300	280	250	230	230	220	215	205	220	210	230	244
21	210	240	250	225	230	215	240	215	225	240	280	270	315	325	210	255	245	225	...a	230	...a	215	220	220	...
22	230	200	240	210	230	200	225	330	235	270	265	260	280	280	370	245	245	235	215	210	p220a	235	215	220	244
23	245	230	220	245	220	200	p210a	220	230	245	285	300	250	340	230	260	225	220	200	230	210	240	250	240	241
24	210	245	200	210	225	190	235	220	240	240	275	...c	...c	280	260	200	240	220	200	200	200	230	220	220	...
25	250	260	220	220	220	205	195	220	230	...c	...c	295	...d	295	310	250	250	220	21[illegible]	...a	250	...c	240	230	...
26	...c	230	...c	...c	200	190	...c	225	240	230	275	230	300	340	...c	270	220	230	200	185	225	260	235	220	...
27	230	215	220	210	205	205	205	210	240	225	...	...	285	260	200	250	260	220	200	200	...a	240	225	220	...
28	230	240	230	205	...a	210	220	p210	240	225	390	290	275	295	245	...c	240	225	210	...a	210	200	240	250	...
29	230	230	230	230	195	205	200	215	250	230	400	...c	...c	350	275	290	260	210	225	200	220	245	250	...c	...
30	220	210	220	235	215	220	190	220	210	245	295	240	...c	280	310	280	230	220	230	200	230	230	220	190	...
31	230	230	240	230	200	230	...a	220	220	300	300	280	280	275	250	290	250	230	215	200	235	210	235	215	...
MEAN*	236	237	228	228	220	209	216	224	227	248	285	286	284	296	279	261	240	226	213	216	221	239	228	232	239

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 297

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1944 JULY 1944

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	3.9	4.0	3.9	4.0	4.0	3.3	...	...	...
2	...	...	...	3.5	4.0	4.1	4.0	4.3	3.5	3.6	...	...	...
3	...	...	...	...	4.1	4.0	4.0	4.0	4.0	3.8	...	...	...
4	...	...	...	3.3	3.9	4.0	4.0	4.0	p3.6	...	...	...	...
5	...	...	...	3.5	3.8	4.1	4.0	p4.0	3.7	3.7	...	...	...
6	...	...	...	...	...	4.0	4.3	...a	4.0	3.8	...	...	...
7	...	...	...	...	3.9	4.0	4.1	4.0	3.9	...	...	...	...
8	...	...	...	...	3.8	4.0	...a	...c	...c	...c	...	...	...
9	...	...	...	...	4.0	4.0	...a	4.8	...	...	...	...	...
10	...	...	...	...	...	...a	3.9	4.0	...a	...a	...	...	...
11	...	...	...	...	4.0	4.0	4.1	4.1	3.9	...c	...	...	...
12	...	...	...	...	4.0	4.1	4.1	...c	4.0	3.5	...	...	...
13	...	...	...	...	...c	...c	...a	4.0	4.0	...	...	...	...
14	...	...	...	...	4.0	4.3	4.2	4.1	4.3	...	...	...	...
15	...	...	...	...	3.9	...c	4.1	3.8	4.0	3.5	...	...	...
16	...	...	...	...	3.8	p4.0a	4.1	...	4.0	3.6	...	...	...
17	...	...	...	...	4.0	4.0	4.1	p4.0c	4.0	3.8	...	...	...
18	...	...	...	...	...	...a	4.0	4.0	4.0	3.7	...	...	...
19	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
20	...	...	...	3.8	3.9	4.0	3.9	4.0	4.0	3.7	...	...	...
21	...	...	...	3.5	3.9	4.0	4.0	4.1	...	3.8	...	...	...
22	...	...	...	3.5	3.8	p4.0a	4.2	...a	...	...a	...	...	...
23	...	...	...	...	4.0	4.0	4.0	4.2	3.8	3.8	...	...	...
24	...	...	...	...	4.0	...c	...c	4.0	4.0	...	...	...	...
25	...	...	...	...	...c	4.1	4.2	4.1	3.8	3.7	...	...	...
26	...	...	...	...	...	3.9	p4.0a	4.0	4.0	...c	...	...	...
27	...	...	...	...	...	...c	4.0	4.0	4.0	3.6	...	...	...
28	...	...	...	...	4.0	3.9	4.0	4.1	3.8	...c	...	...	...
29	...	...	...	...	4.3	4.2	4.1	4.0	4.0	3.8	...	...	...
30	...	...	...	...	3.9	4.1	4.0	4.2	...	3.8	...	...	...
31	...	...	...	3.7	4.0	4.1	4.1	4.0	4.0	3.6	...	...	...
*MEAN	...	...	...	3.6	4.0	4.0	4.0	4.1	3.9	3.7	...	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	235	190	215	...a	230	190	...	...	...
2	...	...	...	210	...h	...h	220	215	180	220	...	...	...
3	...	...	...	...	200	230	220	...a	235	215	...	...	...
4	...	...	...	215	240	230	220	...a	p185	...	...	...	...
5	...	...	...	225	225	205	200	p200	195	220	...	...	...
6	...	...	...	...	...	200	230	...a	235	260	...	...	...
7	...	...	...	...	240	...a	230	...c	...c	...	...	...	...
8	...	...	...	...	250	...c	...a	...c	...c	...c	...	...	...
9	...	...	...	...	...a	...a	...a	...a	...	...	...	...	...
10	...	...	...	...	...	...a	...a	240	...a	...a	...	...	...
11	...	...	...	...	200	215	...a	...c	...c	...c	...	...	...
12	...	...	...	...	230	...a	...a	...c	200	220	...	...	...
13	...	...	...	...	...c	...c	...a	...a	250	...	...	...	...
14	...	...	...	...	210	200	215	...c	200	...	...	...	...
15	...	...	...	...	230	...c	...c	...a	290	...a	...	...	...
16	...	...	...	...	200	...a	235	...	220	225	...	...	...
17	...	...	...	...	210	...a	...c	...c	225	230	...	...	...
18	...	...	...	...	...	...a	...a	...a	275	240	...	...	...
19	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
20	...	...	...	230	230	...a	...a	210	210	180	...	...	...
21	...	...	...	210	215	...a	...a	200	...	255	...	...	...
22	...	...	...	240	p235a	p225a	220	...a	...	...a	...	...	...
23	...	...	...	...	230	220	p215a	210	200	230	...	...	...
24	...	...	...	...	230	...c	...c	...a	220	...	...	...	...
25	...	...	...	...	...	220	200	230	...c	230	...	...	...
26	...	...	...	...	220	...a	200	225	...c	200	...	...	...
27	...	...	...	...	...	...c	...a	...c	...c	...c	...	...	...
28	...	...	...	...	...	195	...c	...c	200	...h	...	...	...
29	...	...	...	...	190	...a	...c	230	215	200	...	...	...
30	...	...	...	...	250	225	...	210	...	250	...	...	...
31	...	...	...	230	220	250	230	...a	210	190	...	...	...
*MEAN	...	...	...	223	223	216	218	217	220	221	...	...	...

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 298

JULY 1944 JULY 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...e	...	...
2	...	...	0.7	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.7	...	...
3	...	...	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	...	...
4	...	...	0.7	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	...	...
5	...	...	0.7	0.6	0.8	0.6	0.8	p0.8	0.8	0.8	0.7	...	...
6	...	...	0.7	p0.8	0.8	0.8	0.8	1.0	0.7	0.8	0.8	...	...
7	...	...	1.0	...c	...c	...c	...c	...c	...c	...c	...c	...	...
8	...	...	0.9	...c	...c	...c	0.8	...	...	...	...	...	...
9	...	...	0.8	1.1	0.8	0.8	1.1	...c	1.1	1.1	0.8	...	...
10	...	...	0.8	p0.7	0.7	0.7	1.0	0.8	0.8	0.7	p0.5	...	...
11	...	...	p0.5	0.7	0.8	0.8	0.7	0.8	1.1	...c	...c	...	...
12	...	...	...	0.8	0.8	1.0	1.1	1.1	...c	1.0	0.8	...	...
13	...	...	...	0.7	1.1	1.0	1.1	1.1	1.0	0.8	0.8	...	...
14	...	...	p0.5	0.7	0.8	1.0	0.8	0.8	0.8	0.8	0.8	...	...
15	...	...	0.6	0.7	0.8	...c	...c	0.7	0.8	0.8	0.8	...	...
16	...	...	0.7	0.7	0.7	1.0	1.1	0.8	0.8	0.7	0.7	...	...
17	...	...	0.7	0.7	0.8	0.6	0.8	p1.0	0.8	0.8	0.8	...	...
18	...	...	0.7	p0.8c	0.8	0.8	0.8	0.8	0.8	0.6	0.6	...	...
19	...	...	0.6	0.7	...c	...c	...c	...c	...c	...c	...c	...	...
20	...	...	...e	0.7	0.6	0.8	0.8	0.7	0.6	0.7	0.6	...	...
21	...	...	0.6	0.6	0.7	p0.6	0.7	0.7	0.7	0.7	0.7	...	...
22	...	...	...e	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.6	...	...
23	...	...	0.6	0.7	0.6	0.7	0.6	0.7	0.6	0.7	0.6	...	...
24	...	...	0.6	0.6	0.6	...c	...c	0.7	0.7	0.7	0.6	...	...
25	...	...	0.7	...c	...c	0.8	0.8	0.7	0.7	0.6	0.6	...	...
26	...	...	0.7	0.7	0.7	0.8	...c	1.0	...c	1.0	0.9	...	...
27	...	...	0.8	0.7	...c	...c	1.0	1.0	1.1	1.0	0.9	...	...
28	...	...	0.8	0.8	0.9	0.7	0.7	1.0	0.7	...c	0.8	...	...
29	...	...	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.7	...	...
30	...	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	...	...
31	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...	...
MEAN*	...	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	...	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.4	2.5	2.6	2.7	2.7	3.0	2.9	2.7	2.6	2.1	...a	...
2	...	1.5	1.8	2.5	2.7	2.8	2.8	2.9	2.8	2.5	2.1	...a	...
3	...	1.4	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.6	2.1	...a	...
4	...	1.4	1.9	2.4	2.7	3.1	2.9	2.7	2.7	2.6	2.2	...a	...
5	...	1.5	2.2	2.4	2.5	2.8	2.9	2.9	2.6	2.6	2.2	...a	...
6	...	...	1.9	p2.7	2.3	2.5	2.7	2.8	2.6	2.5	...a	...	...
7	...	...	2.1	2.5	2.7	3.0	2.9	2.7	2.8	...a	2.0	...a	...
8	...	1.6	2.2	...c	2.8	2.9	2.8	2.9	...c	...c	...c	...c	...
9	...	1.6	2.1	2.4	2.7	3.0	2.8	2.9	2.8	2.6	2.1	...a	...
10	...	...a	2.5	...c	2.7	2.8	2.8	2.9	2.7	2.7	2.4	...a	...
11	...	...a	2.0	2.5	2.7	2.7	3.0	2.9	...c	...c	...c	...a	...
12	...	...a	2.0	2.5	2.7	2.8	3.0	2.9	2.8	2.4	...a	...a	...
13	...	1.2	2.0	2.5	2.7	3.0	3.0	3.0	2.9	2.7	...a	1.6	...
14	...	1.5	2.1	2.6	2.8	2.9	3.0	2.9	2.8	2.7	2.3	1.7	...
15	...	1.5	2.0	2.5	2.9	...c	...c	3.0	2.7	2.7	2.2	...	...
16	...	...a	2.1	2.5	2.7	3.0	3.0	2.9	3.0	...a	2.1	...a	...
17	...	1.2	1.9	2.4	2.7	2.8	2.8	2.8	2.8	2.7	...a	...a	...
18	...	1.2	1.9	p2.2c	2.6	2.7	2.8	2.8	2.7	2.5	2.2	...	...
19	...	1.5	1.9	2.5	...c	...c	...c	2.8	...c	...c	...c	...c	...
20	...	1.4	1.9	2.4	2.6	2.7	2.8	2.9	2.8	2.6	2.3	1.7	...
21	...	1.2	1.9	2.4	2.7	2.7	3.0	2.9	2.8	2.6	2.2	...a	...
22	...	1.5	1.8	2.3	2.6	2.8	2.9	2.9	2.8	...a	...a	...a	...
23	...	1.5	2.2	2.5	2.7	2.8	2.9	2.9	2.8	2.7	2.4	1.6	...
24	...	1.8	1.9	2.4	2.6	...c	...c	2.8	p2.8a	2.7	2.4	...a	...
25	...	1.0	2.0	...c	...c	2.9	2.9	2.8	2.8	2.6	2.4	...a	...
26	...	1.5	2.0	2.5	2.8	3.0	3.0	3.0	...c	2.5	2.3	1.5	...
27	...	...	2.0	2.4	...c	...c	3.0	2.8	2.8	2.5	2.3	1.5	...
28	...	1.5	1.9	2.5	2.8	2.9	2.8	2.9	3.0	...c	2.4	2.0	...
29	...	1.4	2.0	2.5	2.8	2.9	2.9	2.9	2.8	2.6	2.5	1.9	...
30	...	...a	2.1	2.5	2.7	3.0	2.9	3.0	2.7	2.6	2.4	1.7	...
31	...	...a	2.1	2.4	2.5	3.0	2.8	2.9	3.0	2.7	2.4	...a	...
MEAN*	...	1.4	2.0	2.5	2.7	2.8	2.9	2.9	2.8	2.6	2.3	1.7	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 299

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1944 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND AUGUST 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.8	4.9	4.5	4.5	4.6	4.1	4.3	4.6	5.7	6.1	5.6	5.2	5.2	4.6	5.2	5.7	4.8	5.0	4.3	3.4	3.7	3.9	4.0	3.6	4.7
2	3.4f	3.3f	3.0	3.3	3.0	2.9	2.3	3.2	4.0	4.0	4.9	5.0	5.2	5.2	4.7	4.9	4.8	4.3	3.9	2.9	2.9	3.2	2.9	3.2	3.8
3	3.4	3.4	3.4	3.4	3.7	3.0	2.3	3.7	4.0	p4.5	5.0	5.6	7.0	6.1	5.9	5.1	4.5	4.8	3.6	3.8	3.6	3.8	4.0	4.3	4.2
4	3.0	2.4	2.6	2.2	2.4	...a	2.0	3.3	4.4	5.2	5.1	5.7	5.2	5.9	5.3	5.4	5.5	4.9	3.8	2.9	2.7	2.8	2.8	2.2	...
5	2.2	2.5	2.9	2.6	2.6	2.4	2.0	3.4	4.2	4.5	5.1	5.5	5.8	5.0	5.5	5.2	4.4	5.0	...a	2.7	2.9	3.1	3.0	2.8f	...
6	2.4f	2.4f	2.5f	2.5	2.5	1.9	2.1	3.5	4.5	4.4	4.5	5.0	5.8	5.2	5.2	5.5	4.9	4.7	4.1	3.2	...a	2.9	2.8	3.1f	...
7	2.9f	2.4f	3.0f	3.4f	3.6f	3.3	3.3	3.9	...c	...c	5.0	5.0	5.3	p5.1	5.7	5.3	5.2	4.5	4.0	2.4	2.2	2.7	2.9	2.6	...
8	2.7	2.8	2.6	2.7	2.6	2.5	2.4	3.7	5.2	p5.4	5.5	p5.5	5.5	5.5	5.5	5.2	5.2	5.1	4.5	2.6	3.0	2.9	3.5	3.3	4.0
9	2.9	3.1	2.7	2.9	3.6	2.6	...c	...c	...c	...c	...c	...c	...c	5.8	5.7	5.5	5.6	4.7	3.6	p3.1	2.9	3.4	3.8	4.0	...
10	3.8	4.0	4.0	4.3	4.2	3.9	2.9	4.0	5.2	4.9	p5.2	5.5	6.1	5.5	5.6	5.5	5.4	5.7	4.7	3.5	2.7	2.7	2.9	3.1	4.4
11	2.9	2.9f	3.0	3.1	2.7	2.3	1.8	3.8	4.4	4.8	5.3	5.4	6.0	5.7	6.2	5.6	5.5	5.2	4.3	3.2	2.6	3.1	f3.3	3.3f	4.0
12	2.7f	3.0f	3.3	3.3	2.8	2.9f	2.0f	3.8	4.7	5.2	5.6	4.9	6.3	5.4	6.3	5.7	5.4	5.7	4.4	2.3	2.0	2.6	2.9	3.1	4.0
13	3.1	2.8	2.8	3.3	2.5	2.6	2.7	4.0	5.1	5.4	5.8	5.5	5.5	5.9	5.7	5.8	5.2	5.4	5.3	3.6	3.8	3.8	3.7	3.5	4.3
14	4.0	4.4	4.4	4.8	4.6	3.9	3.6	4.1	5.1	5.4	5.4	5.7	5.4	5.7	5.3	5.7	5.5	5.0	4.3	3.4	3.5	3.8	3.5	3.2	4.6
15	3.6	3.6	3.7	4.1	4.2	3.4	3.3	4.4	5.2	5.9	5.8	5.8	5.3	6.1	5.0	5.5	5.3	4.8	3.8	3.8	3.7	3.7	3.6	3.7	4.5
16	3.8	4.1	4.3	4.7	4.6	4.3	4.2	4.4	4.8	5.5	6.0	5.3	5.7	5.5	5.6	5.9	5.7	5.3	4.5	3.7	2.8	3.3	3.5	3.6	4.6
17	3.4	3.8	3.3	3.8	3.5	2.9	2.5	4.0	5.0	5.3	5.1	5.6	p5.8	5.8	p6.1	6.4	5.9	5.0	4.4	3.6	3.3	3.4	3.9	3.7	4.4
18	3.9	4.0	4.1	4.3	4.3	4.6	3.7	4.2	...c	...c	...c	...c	6.1	6.2	6.4	5.9	5.8	5.5	5.8	4.5	4.6	4.1	3.7	4.3	...
19	4.5	3.9	4.4	4.8	4.8	3.9	3.4	4.4	4.8	4.7	5.3	5.3	6.4	6.0	5.4	5.4	5.3	4.9	4.3	3.7	3.5	3.8	3.8	p4.0	4.6
20	4.0	4.5	4.1	4.3	3.7	3.2	3.2	4.2	5.6	5.6	5.5	5.5	p5.8	5.8	5.8	5.3	5.4	5.1	4.5	3.6	3.3	3.6	3.9	3.7	4.6
21	4.0	4.0	4.0	4.3	p4.0	3.6	3.8	4.5	4.9	5.1	p5.4	5.7	5.5	5.4	6.2	5.7	5.5	5.3	4.5	3.6	3.5	4.0	4.3	3.9	4.6
22	4.0	4.3	3.8	4.0	4.0	3.2f	2.9	4.2	4.9	5.5	5.4	p6.1	6.8	5.8	...c	...c	5.3	5.0	4.4	4.0	...a	3.4	3.4	3.4	...
23	3.4	3.2	3.3	3.2	3.0f	2.6f	2.5f	4.5	5.2	5.9	5.8	5.6	6.0	6.7	6.2	5.5	6.0	5.7	5.4	3.8	3.5	3.7	3.4	3.6	4.5
24	3.5	3.5	3.6	3.5	3.3	3.1	2.7	4.2	4.9	6.0	6.0	6.2	6.1	7.3	6.7	7.1	5.7	5.1	4.4	3.7	3.6	3.3	3.7	p3.4	4.6
25	p3.2	...c	...c	...c	...c	...c	...c	...c	5.0	5.9	5.7	5.0	6.4	6.0	5.5	5.6	5.4	...c	...c	...c	2.7	2.7	...f	2.5f	...
26	2.5f	2.6	2.5	2.8	2.8	2.7	2.6	4.4	4.9	5.1	5.1	5.2	5.9	6.1	5.9	5.2	5.3	4.9	4.4	3.5	2.7	3.0	2.9	2.9	4.0
27	3.0	3.2	3.2	3.3	3.3	3.0	2.9	4.3	5.2	5.5	6.0	5.5	6.1	6.5	6.5	5.9	5.8	5.9	4.7	3.7	2.9	2.6	2.8	2.9	4.4
28	3.0	3.3	3.3	3.3	3.0	3.1	3.1	4.5	5.5	5.8	5.8	6.3	7.1	6.8	6.3	6.6	6.3	6.6	6.5	4.7	2.5	2.8	p3.0	p3.0	4.7
29	3.1	3.2	3.4	3.4	2.8	2.7	2.5	4.2	5.0	5.4	6.7	6.8	6.3	6.1	5.6	6.6	6.0	5.1	4.2	3.7	2.6	2.4	2.6	2.6	4.3
30	2.7	2.9	2.8	3.1	2.7	2.7	p2.8	...c	...c	...c	5.5	5.5	6.3	6.6	6.7	6.8	6.1	5.2	4.4	3.8	3.1	3.3	3.1	3.2	...
31	3.5	3.6	3.7	4.0	3.9	3.5	3.4	4.2	4.8	5.2	5.7	6.1	p6.2	6.8	7.4	6.0	5.6	4.7	4.7	3.8	3.3	...c	...c	3.9	...
MEAN*	3.3	3.4	3.4	3.6	3.4	3.1	2.9	4.1	4.9	5.3	5.5	5.6	5.9	5.9	5.8	5.7	5.4	5.1	4.5	3.5	3.1	3.3	3.4	3.3	4.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 300

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1944 AUGUST 1944

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	215	...a	215	230	200	205	235	240	250	260	250	290	265	305	280	280	245	240	215	...a	230	230	250	265	...
2	260	220	...a	235	220	225	200	220	235	220	320	300	325	p355	385	270	265	225	215	230	235	220	240	245	...
3	240	250	245	240	225	210	215	230	235	p285	335	400	295	370	320	315	285	275	235	250	260	240	260	...a	...
4	...a	230	225	220	...a	...a	260	245	260	260	410	265	335	255	300	255	235	230	220	220	235	255	220	235	...
5	255	235	230	215	220	220	215	245	230	300	280	275	255	300	245	250	220	230	...a	...a	245	255	255	265	...
6	245	235	250	230	220	180	270	245	245	310	465	325	280	p320	330	265	235	240	215	240	...a	...a	...a	235	...
7	230	235	260	245	215	220	215	210	265	...c	300	300	p300	p370	270	260	260	230	205	200	225	260	230	230	...
8	230	220	215	240	210	230	220	235	260	p270	300	p290	280	275	300	255	260	235	200	p215	225	210	240	235	244
9	230	245	240	245	215	180	...c	...c	...c	...c	...c	...c	...c	300	300	280	265	230	...a	...a	...a	...a	260	260	...
10	240	260	260	235	220	220	215	245	235	340	p335	330	270	295	300	300	280	250	215	...a	...a	...a	270	265	...
11	280	220	245	225	200	195	190	240	235	265	330	315	315	290	275	280	270	220	...a	...a	220	270	245	240	...
12	215f	280	240	235	190	220	240	220	240	260	285	320	290	295	...a	265	255	245	215	...a	230	255	240	255	...
13	235	250	240	215	210	220	240	240	250	280	260	360	320	320	295	280	275	250	210	...a	...a	...a	240	235	...
14	245	245	235	225	230	215	215	225	230	270	285	275	330	285	345	270	280	240	...a	...a	...a	230	220	225	...
15	220	225	240	240	210	230	210	220	250	275	265	340	345	300	305	285	250	235	...a	...a	235	270	260	250	...
16	240	230	225	235	230	215	230	230	240	270	260	365	315	310	285	270	260	230	215	220	245	235	230	260	252
17	255	230	240	240	205	220	235	230	245	260	350	290	p285	285	p270	255	p240	225	220	215	215	245	230	225	246
18	230	225	245	240	235	215	205	210	...c	...c	...c	...c	...c	300	270	260	265	255	220	240	235	200	230	235	...
19	210	240	230	250	220	p230	235	235	265	260	335	325	280	270	300	295	250	245	225	220	240	270	265	p265	257
20	245	235	225	225	215	230	235	245	265	240	p270	...c	...c	...c	...c	250	275	240	220	220	...a	...a	235	230	...
21	235	230	240	...a	...a	210	220	220	235	270	p270	270	260	325	280	250	240	225	210	210	250	245	230	240	...
22	225	215	225	230	255	220f	225	245	245	275	265	p265	265	265	...c	...c	...a	...a	230	235	...a	270	250	250	...
23	240	245	250	245	260	250	250	230	265	265	275	285	...a	...a	250	285	275	240	220	...a	260	...a	...a	...a	...
24	...a	...a	...a	...a	240	250	255	225	255	260	270	275	345	300	275	260	255	225	220	245	265	285	255	p245	...
25	p270	...c	...c	...c	...c	...c	...c	...c	285	260	295	280	300	275	275	270	250	...c	...c	...c	245	265	240	265	...
26	250	235	250	250	245	240	245	225	205	300	p315	320	295	280	270	285	260	230	220	215	240	245	245	235	254
27	250	235	235	230	240	250	235	230	p230	290	275	290	305	320	275	285	265	235	210	220	205	265	...a	260	...
28	245	255	260	215	230	255	225	230	260	260	285	315	265	285	280	280	265	250	215	215	235	270	p255	p270	255
29	290	270	270	230	225	245	250	240	260	330	275	275	...a	280	325	280	245	...a	...a	...a	...a	...a	290	...a	...
30	280	260	275	245	230	240	p240	...c	...c	...c	300	325	295	315	285	245	250	225	225	215	235	245	245	255	...
31	250	230	230	230	225	215	245	235	305	315	310	315	p305	295	285	260	275	240	225	225	265	250	245	235	259
MEAN*	243	239	241	234	223	223	230	232	249	276	302	306	297	301	292	271	258	237	218	224	238	249	246	247	253

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 301

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1944 AUGUST 1944

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	3.8	4.1	4.2	4.2	4.1	3.9	3.6	...	...	...
2	...	...	...	3.0	3.9	4.0	4.3	4.0	4.1	3.8	3.4	...	...
3	...	...	...	...c	4.0	4.0	3.9	3.8	3.7	3.5	3.2	...	...
4	...	...	...	3.7	4.0	4.0	4.1	4.1	4.0	...	...	...	...
5	...	...	...	...	4.0	4.1	4.0	4.2	4.0	3.6	...	...	...
6	...	...	...	3.9	4.0	4.1	4.0	4.1	4.0	3.8	3.4	...	...
7	...	...	...	...	4.0	4.2	4.3	p4.0	4.0	3.8	3.6	...	...
8	...	...	...	4.0	4.0	p4.0	4.1	4.1	4.0	4.0	3.5	...	...
9	...	...	...	...c	...c	...c	...c	4.3	4.2	3.9	...	...	...
10	...	...	...	4.1	p4.1	4.2	4.1	4.2	4.1	3.8	...	...	...
11	...	...	...	3.5	4.2	4.3	4.2	4.2	4.2	3.9	3.6	...	...
12	...	...	...	...	4.2	4.2	3.9	4.1	...a	3.9	3.3	...	...
13	...	...	...	3.9	4.1	4.4	4.3	4.2	4.2	4.0	...	...	...
14	...	...	...	3.9	4.0	4.2	p4.2	4.2	4.3	...	...	...	...
15	...	...	...	4.0	4.2	4.3	4.3	4.1	4.1	3.9	...	...	...
16	...	...	...	3.9	4.1	4.4	4.2	4.3	4.2	3.9	...	...	...
17	...	...	...	3.8	4.2	4.2	p4.2	4.2	...c	...c	...	...	...
18	...	...	...	...c	...c	...c	...c	4.3	4.1	3.8	...	...	...
19	...	...	...	...	4.2	4.2	4.2	4.2	4.1	3.9	...	...	...
20	...	...	...	4.0	p4.1	...c	...c	...c	...c	4.0	...a	...	...
21	...	...	...	...	p4.0	4.2	4.2	4.3	4.0	3.9	...	...	...
22	...	...	...	4.0	4.0	p4.0	...a	...a	...c	...c	...a	...	...
23	...	...	...	3.9	4.2	4.3	...a	...a	4.2	3.8	3.7	...	...
24	...	...	...	3.9	4.2	4.2	4.3	4.2	4.2	3.9	3.5	...	...
25	...	...	...	3.9	4.3	4.3	4.1	4.3	4.2	4.0	3.5	...	...
26	...	...	...	4.0	4.2	4.4	4.3	4.2	4.2	4.0	...	...	...
27	...	...	...	4.1	4.3	4.1	4.3	4.2	4.2	4.0	3.5	...	...
28	...	...	...	4.0	4.1	4.4	4.4	4.3	4.2	4.0	3.7	...	...
29	...	...	...	4.1	4.1	4.0	...a	4.3	4.3	4.0	3.6	...	...
30	...	...	...	...c	4.2	4.2	4.3	4.2	4.3	4.0	...	...	...
31	...	...	...	4.0	4.2	4.2	q4.2	4.2	4.1	4.0	...	...	...
MEAN*	...	...	...	3.9	4.1	4.2	4.2	4.2	4.1	3.9	3.5	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	205	200	195	205	180	...a	175	...	...	...
2	...	...	...	185	230	200	190	185	190	200	180	...	...
3	...	...	...	...c	225	225	210	225	240	200	245	...	...
4	...	...	...	245	200	200	215	235	200	...	...	...	...
5	...	...	...	...	215	215	200	175	190	215	...	...	...
6	...	...	...	230	210	200	215	205	195	225	205	...	...
7	...	...	...	...	170	175	225	220	240	205	215	...	...
8	...	...	...	225	200	p200	200	210	210	220	215	...	...
9	...	...	...	...c	...c	...c	...c	230	205	200	...	...	...
10	...	...	...	210	p205	200	245	215	200	210	...	...	...
11	...	...	...	195	255	235	220	210	235	225	215	...	...
12	...	...	...	...	250	215	205	215	...a	...a	185	...	...
13	...	...	...	245	225	220	225	210	230	...a	...	...	...
14	...	...	...	220	235h	...a	190	230h	205	...	...	...	...
15	...	...	...	240	245	...a	...a	...a	...a	...a	...	...	...
16	...	...	...	235	240	225	215	230	205	200	...	...	...
17	...	...	...	245	...c	...c	...c	...c	...c	...c	...	...	...
18	...	...	...	...c	...c	...c	...c	220	220	215	...	...	...
19	...	...	...	...	230	205	200	210	205	185	...	...	...
20	...	...	...	205	220	205	...c	...c	...c	...a	...a	...	...
21	...	...	...	...	p220	220	220	200	190	225	...	...	...
22	...	...	...	230	230	p230	...a	...a	...c	...c	...a	...	...
23	...	...	...	235	...a	230	...a	...a	...a	230	220	...	...
24	...	...	...	220	230	220	210	200	240	220	215	...	...
25	...	...	...	225	215	205	170	235	...a	220	200	...	...
26	...	...	...	185	165	175	255	215	210	200	...	...	...
27	...	...	...	220	215	215	215	195	230	225	215	...	...
28	...	...	...	215	250	230	255	210	215	200	230	...	...
29	...	...	...	220	220	215	...a	210	200	185	...a	...	...
30	...	...	...	...c	215	195	200	215	...a	...a	...	...	...
31	...	...	...	230	220	215	q210	190	200	220	...	...	...
MEAN*	...	...	...	221	220	210	213	210	212	209	212	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 302

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1944 AUGUST 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	...	...
2	...	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	...	...
3	...	...	0.7	p0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	...	...
4	...	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	...	...
5	...	...	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	...	...
6	...	...	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	...	...
7	...	...	...c	...c	...c	0.9	1.0	1.0	0.7	0.7	0.7	...	...
8	...	...	0.6	0.7	0.7	p0.7	0.7	0.7	0.9	0.8	0.7	...	...
9	...	...	...c	...c	...c	...c	...c	0.8	0.6	0.7	0.6	...	...
10	...	...	0.8	0.7	p0.9	1.1	1.0	0.9	0.8	0.7	0.7	...	...
11	...	...	0.7	0.7	1.0	0.7	0.7	0.7	0.7	0.7	0.7	...	...
12	...	...	0.7	0.7	1.0	0.9	0.9	0.7	0.7	0.7	0.7	...	...
13	...	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...	...
14	...	...	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	...	...
15	...	...	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.5	...	...
16	...	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...	...
17	...	...	0.6	0.7	0.8	0.8	p0.8	0.8	0.8	0.8	0.9	...	...
18	...	...	...c	...c	...c	...c	...c	0.9	0.8	0.8	0.8	...	...
19	...	...	0.7	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.7	...	...
20	...	...	0.7	q0.8	q0.8	q0.9	q1.0	q0.9	q0.8	0.8	0.8	...	...
21	...	...	q0.8	...c	...c	0.8	0.8	0.8	0.9	0.9	q0.8	...	...
22	...	...	0.7	0.7	0.8	p0.9	0.9	1.0	...c	...c	0.8	...	...
23	...	...	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.7	...	...
24	...	...	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.8	...	...
25	...	...	0.7	0.7	0.8	0.9	0.7	0.9	1.0	0.9	0.8	...	...
26	...	...	0.7	0.7	0.8	0.8	1.0	0.8	0.8	0.7	0.7	...	...
27	...	...	0.8	q1.0	q1.1	0.8	0.8	0.8	0.9	0.7	0.9	...	...
28	...	...	0.8	0.8	0.8	0.8	0.8	0.7	1.0	0.7	0.7	...	...
29	...	...	0.8	0.9	0.9	1.0	1.0	0.9	0.9	1.0	1.0	...	...
30	...	...	...c	...c	0.9	0.9	0.7	0.7	0.7	0.7	0.7	...	...
31	...	...	0.7	1.0	1.0	1.0	q0.9	0.9	1.0	0.7	0.8	...	...
MEAN*	...	...	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	...	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.7	2.0h	2.4	2.6h	...a	...a	3.0	2.8	2.6	2.4	2.0	...
2	...	1.4	2.1	2.4	2.6	2.9	2.8	2.9	2.9	2.5	2.3	...a	...
3	...	1.7	2.5	p2.6	2.7	2.8	2.8	2.8	2.7	2.7	2.3	1.7	...
4	...	...a	2.1	2.5	2.7	2.8	2.9	2.9	2.7	2.7	2.5	2.1	...
5	...	1.7	2.4	2.5	2.8	2.8	3.0	2.9	2.9	2.6	2.1	1.7	...
6	...	2.0	2.1	2.5	2.7	2.8	3.0	2.9	2.8	2.6	2.4	1.8	...
7	...	1.6	2.3	2.5	2.7	2.7	3.0	3.0	2.9	2.7	2.4	1.8	...
8	...	1.8	2.5	2.8	2.9	p3.0	3.1	3.1	3.0	2.7	2.4	1.8	...
9	...	...c	...c	...c	...c	...c	...c	2.8	2.8	2.7	2.7	2.0	...
10	...	1.7	2.4	2.9	p3.0	3.1	3.1	3.1	3.0	2.7	2.5	2.1	...
11	...	...a	2.1	2.6	2.8h	3.0	2.8	2.9	3.0	2.7	2.0	2.0	...
12	...	1.8	2.2	2.7	3.1	3.1	3.0	3.0	2.8	...a	2.4	1.9	...
13	...	1.4	2.3	2.7	2.9	3.1	3.1	3.1	3.0	2.6	...a	...a	...
14	...	1.9	2.6	2.6	2.7h	3.0	3.0	3.0	2.8	2.8h	2.4	2.0	...
15	...	1.9	2.5	2.7	2.9	3.2	3.2	3.2	2.9	...a	...a	1.9	...
16	...	2.1	2.2	2.4	2.9	2.7	3.1	3.1	3.0	2.8	2.4	1.7	...
17	...	1.8	2.2	2.6	2.8	3.0	p2.9	2.9	2.9	2.9	2.6	1.9	...
18	...	1.9	2.3	...c	...c	...c	...c	2.9	2.8	2.8	2.7	2.0	...
19	...	1.8	2.0	2.6	2.9	3.1	3.0	3.0	3.0	2.8	2.6	1.9	...
20	...	2.1	2.5	2.4	2.5	3.0	3.0	2.9	2.9	...a	...a	...a	...
21	...	2.0	2.3	2.6	p2.7	2.8h	3.2	3.0	2.8	2.7	2.4	1.9	...
22	...	1.6	2.3	2.7	...c	...c	3.1	2.9	...c	...c	2.3	...a	...
23	...	2.2	2.5	2.7	2.9	3.1	3.2	3.1	3.0	2.8	2.5	...a	...
24	...	1.8	2.3	2.7	3.0	3.1	3.2	3.1	3.0	2.8	2.4	1.8	...
25	...	...c	2.3	2.6	2.9	3.0	3.0	3.2	3.1	2.9	2.5	...c	...
26	...	1.9	2.2	2.5	2.7	3.1	3.0h	3.0	3.0	3.0	2.5	2.0	...
27	...	1.5	2.5	2.7h	2.9	3.0	3.0	2.9	2.8	2.8	2.5	2.2	...
28	...	2.1	2.4	2.7	2.8h	2.8	q3.0	3.2	2.9	2.8	2.5	2.0	...
29	...	1.9	2.4	2.8	2.9	2.9	2.9	2.8	2.8	2.8	...a	...a	...
30	...	...c	...c	...c	2.9	2.8	2.9	3.0	2.9	...a	2.6	1.9	...
31	...	1.7	2.3	2.7	2.8	2.8	q2.8	2.8	2.7	2.7	2.5	1.9	...
MEAN*	...	1.8	2.3	2.6	2.8	2.9	3.0	3.0	2.9	2.7	2.4	1.9	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 303

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — SEPTEMBER 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.5	3.5	3.5f	3.4f	3.0	2.9	3.3	4.7	4.9	5.1	5.3	5.9	6.0	5.9	5.4	5.5	5.0	5.0	4.3	3.5	3.7	3.9	3.6	3.5	4.4
2	3.4	3.8	3.6	3.2	3.2	3.2	3.0	4.2	4.5	5.1	5.1	5.2	5.8	5.8	6.2	6.1	5.9	6.0	4.8	4.8	4.5	4.3	3.9	3.4	4.5
3	3.3	3.3	3.3	3.5	3.1	3.3	3.1	4.8	5.3	5.5	...c	...c	...c	...c	p6.3	6.3	6.0	5.5	5.5	4.4	4.1	3.7	3.1	2.8	...
4	3.1	3.5	3.6	3.8	3.5	3.5	3.2	4.5	5.0	5.3	5.5	5.7	6.0	6.4	5.6	5.3	5.7	4.8	4.6	3.7	3.1	3.1	3.1	3.4	4.4
5	3.3	3.4	3.1	2.4	2.5	2.7	2.5	4.1	4.4	5.3	4.9	6.0	7.6	7.3	6.2	6.9	6.3	5.5	4.3	3.3	2.8	3.3	3.1	3.3	4.4
6	3.3	3.3	3.4	3.4	3.0	2.9	2.8	4.0	4.8	5.1	5.2	5.6	5.3	6.4	6.0	5.6	5.4	5.5	4.4	3.9	3.5	3.2	3.2	3.1	4.3
7	3.1	3.0	3.3	3.7	3.7	3.6	3.5	4.3	4.6	5.6	5.8	5.6	5.8	5.7	5.6	6.2	6.2	5.2	5.4	4.4	3.8	3.2	3.5	3.6	4.5
8	3.3	3.0	3.3	3.8	3.6	3.3	3.6	4.8	5.0	5.3	5.4	5.7	6.2	6.2	6.1	6.3	5.8	5.2	4.7	4.1	3.7	3.8	3.6	3.5	4.6
9	3.6	3.5	3.3	2.8	2.9	2.9	2.9	4.7	5.8	6.2	5.5	5.5	6.6	6.3	5.5	5.9	5.5	5.0	4.5	3.9	3.2	3.4	3.3	3.3	4.4
10	3.4	3.1	3.1	3.3	2.6	2.9	3.1	5.1	4.8	5.1	5.2	6.1	7.3	6.3	6.3	6.3	6.5	6.0	5.3	3.8	2.5f	3.1	3.3	3.4	4.5
11	2.8	3.0	3.1	3.2	3.2	3.3	3.4	4.4	5.3	6.4	6.6	6.0	p6.7	6.7	6.5	5.8	5.9	5.5	5.0	4.3	3.8	3.7	3.7	3.4	4.6
12	3.6	3.8	3.9	3.5	2.7	3.4	3.7	4.8	5.8	6.2	6.3	7.1	6.7	7.1	6.9	6.4	6.4	5.7	5.2	4.5	4.2	4.0	3.8	3.6	5.0
13	3.5	3.7	3.8	3.7	3.7	3.8	3.8	5.6	7.0	6.3	5.8	6.4	6.9	7.8	6.4	6.0	5.4	5.2	4.7	4.4	3.7	3.4	3.4	3.3	4.9
14	3.5	3.5	...f	3.6	...c	...c	...c	p5.1	5.7	6.6	5.9	6.8	7.5	7.3	6.5	5.8	5.5	5.7	5.4	p4.8	4.3	4.2	4.3	4.4	...
15	4.6	4.4	4.7	4.4	4.1	4.1	4.1	5.0	5.3	5.6	6.4	7.0	7.4	7.3	7.3	6.5	6.0	5.0	4.5	4.6	4.1	3.4	3.7	3.3	5.1
16	3.3	3.6	3.8	4.5	3.8	3.8	3.8	5.0	5.2	5.7	5.8	6.4	6.4	7.3	6.7	6.0	5.5	5.7	5.2	5.0	3.8	3.5	3.6	4.0	4.9
17	4.0	4.0	4.3	4.6	4.0	3.5	3.8	4.6	5.2	5.8	5.8	6.4	6.7	7.2	6.4	6.2	6.0	5.4	5.0	3.9	3.9	3.7	3.9	3.9	4.9
18	4.0	3.9	4.0	4.2	4.2	3.9	3.8	4.7	4.9	5.3	5.4	6.1	...c	...c	...c	...c	...c	5.5	...c	...c	3.8	3.9	4.1	4.0	...
19	4.1	4.1	4.3	4.2	3.1	3.1	3.7	4.7	p5.3	5.9	6.2	6.6	7.0	8.0	6.7	6.0	5.6	4.9	4.6	4.8	4.4	4.0	3.8	4.0	5.0
20	4.2	4.2	4.0	3.4	3.3	3.4	3.8	5.1	5.2	5.2	5.7	6.4	6.4	7.0	6.8	6.2	5.7	5.5	5.2	4.3	3.8	3.4	3.5	3.4	4.8
21	3.3	3.5	3.7	3.0	2.5	2.7	3.6	4.7	4.6	6.3	7.6	7.5	8.5	8.7	6.9	5.6	5.4	5.4	5.1	4.5	4.4	4.5	4.2	4.1	5.0
22	3.8	3.4	3.8	3.4	3.1	3.5	4.1	5.4	4.8	4.8	5.4	6.3	7.4	7.4	7.0	6.1	5.6	5.2	4.8	4.5	4.0	4.0	4.3	4.3	4.8
23	4.2	3.9	4.1	4.2	4.2	4.0	4.4	4.5	4.9	4.9	6.0	7.3	8.0	7.9	7.5	6.2	5.6	5.5	4.9	5.0	4.5	4.1	...f	2.5f	...
24	2.6	2.7	3.0	2.7	...f	3.8	3.9	4.7	5.6	5.0	5.4	6.1	7.8	6.3	5.7	5.3	5.4	5.0	5.3	6.0	5.4	4.5	4.0	4.0	...
25	3.6	3.5	3.9	4.1	4.3	4.0	4.0	4.9	5.2	5.6	6.0	5.8	6.8	7.3	6.4	5.9	6.3	6.2	5.5	4.2	3.6	3.7	3.6	3.6	4.9
26	3.7	3.9	4.0	...f	...f	...f	3.8	4.9	5.2	6.1	6.2	6.0	6.6	6.9	6.9	6.9	6.4	6.0	5.6	4.9	3.5	3.6	3.7	3.8	...
27	3.8	4.0	3.8	3.8	3.5f	3.5	4.0	5.1	5.5	p6.5	5.6	...c	...c	6.3	...c	...c	6.4	5.6	5.5	4.5	3.4	3.6	3.8	3.8	...
28	3.9	3.9	4.0	3.3	2.8	3.3	4.1	4.8	5.0	5.0	5.2	5.7	6.7	7.1	6.4	p6.0	5.6	5.3	4.8	3.8	3.3	3.5	3.6	3.9	4.6
29	3.7	3.8	3.6	3.3	3.5	3.3	4.1	4.6	p5.0	5.3	5.2	5.5	6.1	6.3	6.8	6.1	6.2	5.5	5.0	4.6	4.3	4.0	4.1	4.1	4.8
30	4.1	4.3	4.2	3.8	3.3	3.5	3.9	4.9	5.7	6.1	6.1	6.2	6.7	6.8	7.2	7.1	6.5	6.2	6.2	5.8	5.0	3.8	3.8	4.9	5.2
31																									
MEAN*	3.6	3.6	3.7	3.6	3.4	3.4	3.6	4.8	5.2	5.6	5.7	6.2	6.8	6.9	6.4	6.1	5.8	5.5	5.0	4.4	3.9	3.7	3.7	3.6	4.8

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 304

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1944 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — SEPTEMBER 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	235	235	245	225	245	245	250	235	265	335	330	320	300	300	330	305	275	255	235	260	265	235	250	240	267
2	240	245	220	230	215	230	250	220	210	315	315	375	300	340	295	305	280	235	245	240	255	260	220	245	262
3	240	255	220	220	...a	245	265	235	275	290	...c	...c	...c	...c	p265	270	245	250	220	230	230	235	220	260	...
4	260	255	245	250	245	240	245	240	250	300	305	300	295	230	275	p285	250	230	225	230	245	245	260	260	259
5	245	230	220	210	240	220	250	235	215	230	385	350	280	270	300	275	255	240	210	220	240	245	245	245	254
6	235	245	230	215	250	225	235	235	285	310	325	310	410	290	270	270	270	245	225	225	235	240	235	245	261
7	240	235	245	235	240	230	235	235	305	300	300	310	315	300	310	300	250	230	225	220	210	230	240	240	258
8	240	240	240	230	235	225	235	235	250	285	325	320	285	295	280	260	255	235	220	220	245	240	265	260	255
9	250	235	215	245	250	265	250	245	270	265	295	325	265	280	310	280	255	240	230	235	255	245	245	260	259
10	245	230	235	...a	235	250	245	240	270	340	330	305	245	300	280	275	240	255	215	210	250	265	235	250	...
11	235	245	260	225	230	255	255	240	315	280	260	300	p285	275	270	270	260	230	220	215	235	245	240	255	254
12	250f	250	230	200	185	240	250	230	280	280	300	280	300	290	275	285	265	240	225	245	235	...a	250	235	...
13	260	p250	...c	...c	...c	p215	p250	260	245	285	295	330	290	260	270	270	255	235	220	220	230	235	230	250	...
14	240	225	200	215	...c	...c	...c	...c	300	280	320	290	230	265	270	300	p225	240	225	p220	215	...a	230	270	...
15	240	220	215	200	255	240	245	235	235	330	310	280	230	280	280	270	255	215	230	235	210	230	240	230	248
16	220	230	235	225	210	225	240	235	270	285	310	270	300	280	275	285	280	240	225	215	220	225	235	245	249
17	250	245	235	...c	205	...c	...c	...c	270	280	305	295	285	270	275	305	255	245	220	240	240	240	235	250	...
18	230	235	240	235	225	225	230	250	290	325	345	330	320	285	270	270	270	255	...c	...c	255	250	245	240	...
19	240	240	230	200	210	250	250	235	p260	235	290	285	285	260	265	265	250	230	230	230	225	235	245	260	248
20	245	235	220	235	240	240	...a	250	260	300	320	280	300	265	270	270	280	250	220	215	225	260	260	250	...
21	245	230	215	225	235	250	235	250	245	345	300	320	295	270	265	270	295	...a	230	245	270	255	255	240	...
22	220	240	230	200	240	235	255	250	265	410	340	320	290	280	265	275	255	240	235	230	220	245	245	270	261
23	260	265	235	225	220	220	220	230	290	410	330	315	290	250	270	275	270	260	230	240	220	240	240	260	261
24	270	255	235	255	240	280	250	260	260	380	390	360	285	280	280	315	300	250	250	250	220	225	240	230	273
25	245	260	250	p250	p245	p250	p260	p260	290	235	235	365	305	275	275	300	280	240	215	210	215	240	240	255	262
26	265	235	230	225	230	240	250	260	300	260	280	325	305	280	290	230	260	240	215	210	215	250	...a	235	...
27	255	...a	...a	240	255	250	255	275	p280	245	285	...c	...c	305	...c	...c	270	245	220	220	240	250	265	260	...
28	240	250	235	220	205	260	245	255	305	345	340	p320	305	p295	285	p280	275	250	225	220	260	260	...a	...a	...
29	245	240	235	220	240	230	240	250	p280	310	310	355	310	305	280	280	270	240	225	235	235	260	255	...a	...
30	...a	...a	...a	225	230	235	235	245	285	275	295	280	290	290	295	275	260	245	235	220	225	245	255	235	...
31																									
MEAN*	244	241	231	225	232	240	245	244	271	307	314	315	296	283	281	282	264	242	226	228	235	244	244	249	258

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 305

SEPTEMBER 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1944

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.0	4.2	4.2	4.3	4.3	4.3	4.0	3.8	...	...
2	...	...	...	4.0	4.2	4.3	4.3	4.3	4.2	4.0	...	...	...
3	...	...	...	4.0	...c	...c	...c	...c	4.2	3.9	3.5	...	...
4	...	...	...	4.0	4.1	4.3	4.2	4.2	4.1	...	...	...	...
5	...	...	...	4.0	4.2	4.2	4.2	4.1	4.2	4.0	3.6	...	...
6	...	...	...	4.0	4.2	4.2	4.3	4.3	4.1	4.0	3.8	...	...
7	...	...	...	4.0	4.2	4.3	4.3	4.3	4.2	3.9	3.7	...	...
8	...	...	...	4.0	4.2	4.3	4.3	4.3	4.2	4.0	...	...	...
9	...	...	3.8	4.0	4.3	4.3	4.4	4.2	4.2	4.0	3.6	...	...
10	...	...	...	4.2	4.3	...a	4.3	4.3	4.2	4.1	...	...	...
11	...	...	3.8	4.1	4.2	4.3	4.2	4.2	4.3	4.0	3.7	...	...
12	...	...	3.8	4.0	4.3	4.3	4.3	4.1	4.2	4.0	3.7	...	...
13	...	...	3.8	4.1	4.3	4.3	4.4	4.2	4.3	4.1	3.7	...	...
14	...	...	4.0	4.2	4.3	4.3	4.3	4.2	4.1	3.9	...	...	...
15	...	...	...	4.2	4.3	4.3	4.3	4.3	4.1	4.1	3.7	...	...
16	...	...	3.8	4.1	4.2	4.3	4.4	4.1	4.2	4.0	3.7	...	...
17	...	...	...	4.1	4.2	4.2	4.3	4.3	4.3	4.0	3.7	...	...
18	...	...	3.8	4.0	4.2	4.3	4.3	4.2	4.1	4.0	3.8	...	...
19	...	...	...	4.2	4.3	4.2	4.3	4.3	4.3	4.0	3.6	...	...
20	...	...	...	4.1	4.2	4.2	4.3	4.3	4.1	4.0	3.5	...	...
21	...	...	...	4.1	4.2	4.2	4.1	4.2	4.2	4.0	...	...	...
22	...	...	...	4.3	4.2	4.2	4.2	4.2	4.1	4.0	3.7	...	...
23	...	...	...	4.2	4.2	4.2	4.3	4.3	4.2	4.0	3.7	...	...
24	...	...	3.8	4.3	4.3	4.1	4.2	4.2	4.1	4.0	...	...	...
25	...	...	3.9	4.2	4.2	4.5	4.3	4.3	4.3	4.1	3.7	...	...
26	...	...	...	4.0	4.3	4.3	4.3	4.3	4.2	4.0	3.8	...	...
27	...	...	3.9	4.0	4.3	...c	...c	...c	...c	...c	3.7	...	...
28	...	...	3.9	4.2	4.2	p4.1	4.1	4.1	4.2	p4.0	3.8	...	...
29	...	...	...	4.1	4.3	4.3	4.3	4.3	4.3	4.1	3.8	...	...
30	...	...	4.0	4.3	4.3	4.3	4.2	4.3	4.3	4.2	3.9	...	...
31													
MEAN*	...	...	3.9	4.1	4.2	4.3	4.3	4.2	4.2	4.0	3.7	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	215	215	200	q210	205	185	245	225	...	...
2	...	...	...	190	195	190	200	225	220	235	...	...	...
3	...	...	...	230	...c	...c	...c	...c	210	200	220	...	...
4	...	...	...	225	210	205	190	195	190	...	...	...	...
5	...	...	...	200	200	235	220	195	205	245	210	...	...
6	...	...	...	205	215	215	210	215	220	...a	200	...	...
7	...	...	...	215	230	220	205	225	215	215	220	...	...
8	...	...	...	225	205	200	200	225	215	205	...	...	...
9	...	...	230	230	215	215	265	210	...a	200	...a	...	...
10	...	...	...	220	...a	...a	240	200	195	225	...	...	...
11	...	...	265	245	240	210	210	220	210	210	200	...	...
12	...	...	250	225	225	210	215	230	220	220	225	...	...
13	...	...	230	220	220	200	q180h	q185h	215	220	230	...	...
14	...	...	...	225	220	210	...a	...a	210	200	...	...	...
15	...	...	...	230	225	235	210	200	215	220	220	...	...
16	...	...	240	225	210	220	215	185	195	210	205	...	...
17	...	...	...	220h	220	195	210	215	210	190	220	...	...
18	...	...	220	200	195	180	225	225	225	220	215	...	...
19	...	...	...	225	195	195	220	215	210	200	240	...	...
20	...	...	...	220	215	195	200	215	200	215	...c	...	...
21	...	...	...	240	220	215	210	195	215	...a	...	...	...
22	...	...	...	215	215	200	240	220	215	215	210	...	...
23	...	...	...	230	200	220	230	220	220	225	210	...	...
24	...	...	220	225	210	210	220	215	215	225	...	...	...
25	...	...	220	240	200	200	...a	195	220	205	230	...	...
26	...	...	...	225	230	210	190	190	205	230	230	...	...
27	...	...	225h	210	210	...c	...c	...c	...c	...c	200	...	...
28	...	...	205	200	185	p185	185	p200	220	p220	225	...	...
29	...	...	...	195	190	200	200	190	...a	230	220	...	...
30	...	...	250	200	230	190	195	190	175	230	220	...	...
31													
MEAN*	...	...	232	219	212	206	211	207	209	217	218	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 306

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1944 SEPTEMBER 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	0.7	0.8	1.1	1.0	0.9	0.9	0.9	0.8	0.7	0.7	...
2	...	0.7	0.8	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.6	...
3	...	0.6	0.7	0.7	...c	...c	...c	...c	0.9	0.8	0.7	0.7	...
4	...	0.7	q0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	...
5	...	0.6	0.7	0.8	0.8	0.8	0.8	0.9	0.7	0.7	0.7	...	...
6	...	0.7	0.8	0.8	1.0	0.9	0.9	0.9	0.7	0.7	0.7	0.7	...
7	...	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.7	0.8	0.7	0.7	...
8	...	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.7	0.7	0.7	0.7	...
9	...	0.7	0.8	1.0	1.0	0.9	0.9	0.9	0.9	0.7	0.7	0.8	...
10	...	0.7	0.7	0.8	0.7	1.0	1.0	1.0	0.9	0.7	0.7	0.8	...
11	...	0.7	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.9	0.8	...
12	...	0.7	0.7	0.7	0.9	1.0	0.9	0.8	0.8	1.0	0.9	0.8	...
13	...	0.6	0.7	0.7	0.8	0.8	1.0	0.8	0.7	0.9	0.8	0.8	...
14	...	...	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...
15	...	0.7	0.7	0.8	1.0	1.0	1.0	0.8	0.7	0.7	0.8	0.7	...
16	...	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	...
17	...	0.6	0.7	0.7	0.8	0.9	0.8	1.0	0.8	0.7	q1.1	0.7	...
18	...	0.6	0.7	0.7	1.1	1.2	1.2	1.2	1.2	1.2	0.8	0.8	...
19	...	0.7	p0.9	1.2	1.2	1.5	1.4	1.4	1.1	0.7	0.7	0.7	...
20	...	0.7	0.7	0.7	1.1	1.2	1.0	1.2	0.7	0.7	q0.5	0.5	...
21	...	0.7	0.7	0.7	0.8	0.8	1.0	0.7	0.8	0.7	0.7	0.7	...
22	...	0.5	0.7	0.7	1.0	1.1	0.8	0.8	0.9	0.8	0.7	0.7	...
23	...	0.7	0.7	0.7	1.1	1.2	1.2	1.1	1.2	1.0	0.7	0.7	...
24	...	0.6	0.7	0.7	1.2	1.2	1.2	1.2	1.2	0.7	0.7	0.7	...
25	...	0.7	1.2	1.2	1.2	1.2	1.2	1.3	1.1	1.2	0.7	0.7	...
26	...	0.5	0.7	0.7	1.2	1.4	1.3	1.2	1.3	1.1	1.2	1.1	...
27	...	0.6	0.7	1.1	1.2	...c	...c	1.2	...c	...c	0.9	0.7	...
28	...	0.7	0.7	0.7	0.8	0.9	1.1	1.1	1.0	p0.8	0.7	0.7	...
29	...	0.7	q0.8	1.0	1.0	1.2	1.1	1.1	0.7	0.7	0.7	0.7	...
30	...	0.7	0.9	1.1	1.2	1.2	1.1	1.0	0.9	0.7	0.7	0.7	...
31													
MEAN*	...	0.7	0.8	0.9	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.9	2.4	2.7	3.0	3.1	2.8	2.9	2.9	2.8	2.6	2.0	...
2	...	1.8	2.4	2.7	2.8	2.9	3.0	3.0	3.0	2.9	2.5	2.7	...
3	...	1.8	2.4	2.7	...c	...c	...c	...c	2.9	2.9	2.5	2.0	...
4	...	2.2	2.4	2.8	3.1	2.9	2.9	3.1	3.0	2.8	2.5	2.0	1.1
5	1.1	1.9	2.4	2.8	3.0	3.0	3.0	3.0	3.0	2.8	2.5	1.9	...
6	...	1.8	2.7	2.8	3.0	3.0	3.1	3.1	3.0	2.9	2.6	2.1	1.4
7	1.1	2.0	2.5	2.8	2.7	2.8	2.9	2.9	2.9	2.9	2.6	2.0	...
8	1.0	2.3	2.3	2.7h	2.8	2.9	2.8	2.9	2.9	2.8	2.4	2.6	1.3
9	1.0	1.9	2.8	2.8h	2.9	3.0	3.0	...a	...a	2.8	...a	1.9	...
10	1.1	1.9	2.4	2.8	2.7	2.8	2.8	2.9	2.9	...a	2.7	2.2	...
11	1.1	2.4	2.5	2.8	2.9	2.9	2.8	2.8	2.9	2.9	2.5	2.0	1.3
12	...a	2.2	2.5	2.8	3.0	3.0	2.9	2.8	2.8	2.6	2.7	...a	...
13	...	2.1	2.5	2.9	3.0	3.0	3.0	3.2	2.9	2.8	2.5	2.1	...
14	...	...c	2.6	2.9	3.1	3.1	3.2	3.1	2.8	2.6	2.6	2.0	...
15	...	1.9	2.5	2.8	3.1	q3.0	q3.0	...a	3.1	3.0	2.6	2.1	...
16	...	2.0	2.5	2.8	2.9	2.9	2.8	2.8	2.9	2.8	2.4	2.1	1.3
17	...	2.0	2.5h	2.8h	3.0	3.1	3.2	3.0	3.0	2.9	2.6	2.1	1.4
18	1.5	2.0	2.5	2.9	2.9	3.0	2.9	3.0	3.0	2.9	2.5	...a	...
19	1.4	2.1	p2.5	2.9	3.0	3.0	3.0	2.9	2.9	2.9	2.6	2.6	1.4
20	...a	2.0	2.6	2.9	3.0	3.0	3.2	3.0	3.0	2.9	...a	2.3	1.4
21	1.4	2.1	2.6	2.8	3.0	3.0	2.8	3.0	2.9	2.9	2.5	...a	1.4
22	1.4	2.1	2.6	2.8	3.0	3.0	3.0	3.2	3.1	3.0	2.7	2.1	1.5
23	1.5	2.2	2.5	2.8	2.9	2.9	2.9	2.8	2.8	2.8	2.6	...a	...a
24	1.5	2.0	2.5	2.7	2.9	3.0	3.0	2.7	3.0	2.9	2.6	2.1	...
25	...c	2.0	2.5	2.8	2.9	2.9	3.0	...a	2.9	2.9	2.6	2.1	1.1
26	1.5	2.0	2.5	2.7	3.0	3.0	2.9	2.7	2.7	2.7	2.3	2.1	...a
27	1.5	2.3	2.4h	2.8	2.8	...c	...c	2.8	...c	...c	2.6	2.0	...
28	1.5	2.0	2.5	2.8	3.0	3.0	2.9	2.9	3.0	p2.8	2.6	2.0	1.6
29	1.5	2.2	p2.4	2.7	2.7	q2.9	...a	2.9	2.7	3.0	2.8	2.1	1.5
30	1.5	2.3	2.7	3.0	3.2	3.0	3.1	3.3	3.0	2.9	2.7	2.2	...a
31													
MEAN*	1.3	2.0	2.5	2.8	2.9	3.0	3.0	3.0	2.9	2.8	2.6	2.1	1.4

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 307

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1944 OCTOBER 1944

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.2	4.2	4.4	4.8	2.5	3.2	3.8	5.2	6.0	6.4	6.8	6.6	7.1	6.1	6.2	5.8	5.2	5.2	5.0	4.6	3.5	2.7f	2.7f	2.5f	4.8
2	2.4f	2.6f	...f	3.1	3.2	3.1	...c	...c	5.1	5.6	6.0	6.9	6.8	6.6	6.1	5.9	6.0	5.6	5.0	3.9	3.0	2.9	2.9	3.0	...
3	2.9	2.8	2.5	2.2	2.2	2.5	4.1	5.0	5.0	5.9	7.0	7.3	7.7	7.3	7.0	6.4	6.4	5.9	5.6	4.7	3.7	3.7	3.8	3.9	4.8
4	3.8	4.1	4.3	3.7	3.0	2.4f	3.6	4.5	5.0	5.2	5.9	5.8	6.7	6.4	6.7	6.7	6.1	5.7	5.0	3.7	3.2	3.2	3.4	3.4	4.6
5	3.5	3.4	3.5	2.8	2.8f	3.0	4.0	4.9	5.6	6.0	5.6	6.2	6.9	8.2	7.8	6.7	6.0	5.7	5.4	4.6	4.2	3.9	4.0	4.1	5.0
6	4.1	3.9	3.9	3.8	3.8	4.2	4.8	5.6	6.0	p6.0	6.1	6.4	6.3	6.8	7.1	6.8	6.7	6.6	6.3	5.8	5.2	4.4	4.2	4.0	5.4
7	4.0	4.2	4.3	4.2	2.9	3.5	4.5	5.6	5.9	5.6	5.8	6.7	7.4	7.7	7.2	6.7	6.3	5.9	5.6	4.9	4.6	4.1	4.0	3.8	5.2
8	3.8	3.9	4.0	3.8	...c	...c	...c	...c	...c	...c	...c	7.0	7.7	7.5	6.9	6.2	6.3	6.2	5.9	5.1	4.7	4.4	4.5	4.2	...
9	3.7	3.5	3.1	2.6	2.3	2.4	4.4	5.4	5.8	6.2	6.8	7.2	7.5	8.2	8.2	7.8	8.0	7.2	6.2	5.5	5.0	4.1	3.8	3.5	5.4
10	3.3	3.3	3.3	3.3	3.2	3.3	4.3	5.8	5.7	6.6	6.6	p6.8	6.9	7.0	7.4	7.3	7.2	7.2	7.1	6.2	5.7	4.7	4.3	4.2	5.4
11	4.1	4.1	3.6	2.9	2.8	3.2	4.3	5.1	6.1	7.1	7.5	8.0	9.5	9.5	8.6	7.3	6.4	6.1	5.5	5.6	5.6	5.0	4.8	4.9	5.7
12	4.8	4.6	4.5	4.1	4.0	3.7	3.8	4.1	4.3	4.6	4.7	5.2	5.2	4.9	5.0	4.9	4.8	4.9	4.8	4.2	3.7	3.4	3.4	3.1	4.4
13	2.9f	3.2	3.4	3.4	3.2	3.0	4.1	4.8	5.6	5.5	5.9	6.0	6.0	6.8	6.7	6.5	5.6	5.3	5.1	5.1	4.9	4.4	4.2	4.4	4.8
14	...f	...f	...f	3.2	3.2	3.3	4.4	5.6	6.3	6.5	6.7	7.0	7.2	p7.2	7.9	7.1	6.4	6.2	5.7	5.5	4.6	4.5	4.3	4.1	...
15	4.3	4.2	3.4	3.1	3.0	3.5	3.5	3.9	4.8	4.9	5.4	p5.2	5.1	5.1	4.6	4.5	4.3	4.1	4.1	4.3	2.8	2.0f	...f	...a	...
16	...f	...f	...f	2.6f	2.7f	2.3f	4.1	4.2	5.3	5.7	6.7	6.5	6.8	7.3	7.0	6.6	6.6	6.3	5.4	5.0	4.7	4.1	3.7f	3.9	...
17	4.2f	4.1f	3.3f	2.7f	...f	2.3f	3.6	4.3	p4.5	...c	p5.2	5.7	6.0	5.9	6.0	5.9	5.6	5.1	4.9	4.7	4.2	4.1	3.8	3.4	...
18	3.2	2.5f	2.5f	2.3	2.3	2.5	4.3	5.1	5.9	5.9	6.6	7.1	8.6	8.9	7.2	6.1	6.5	6.6	6.3	5.8	5.1	4.4	4.2	3.8	5.2
19	3.8	3.6	3.8	3.5	3.3	3.3	4.5	5.6	5.6	6.3	6.3	7.2	7.6	7.1	p7.1	6.8	6.6	5.9	5.7	6.2	5.2	4.1	4.0	3.9	5.3
20	4.1f	...f	...f	...f	...f	3.7f	5.2	5.7	6.0	p6.1	6.2	6.8	7.3	7.9	7.9	7.7	7.6	6.7	6.3	5.8	4.7	4.3	3.8	3.8	...
21	...f	...f	3.9f	...f	3.7	3.4	4.9	5.1	5.4	p6.0	6.9	7.8	7.8	8.5	8.3	7.7	7.3	6.9	6.4	5.6	4.8	4.5	4.4	4.2	...
22	4.1	4.0	3.8	3.6f	3.3	3.3	4.5	5.4	5.3	5.4	6.1	6.3	6.7	7.1	7.6	7.4	6.8	6.2	6.1	5.4	4.8	4.6	4.4	4.3	5.3
23	4.3	4.5	4.5	4.1	4.1	3.9	4.8	5.5	5.5	6.1	p7.2	p7.8	p8.1	7.9	7.4	7.2	6.5	6.8	6.5	6.0	5.6	5.3	5.2	5.2	5.8
24	4.7	4.7	4.1	4.4	4.5	4.1	4.9	5.8	6.0	6.6	8.9	8.0	7.8	8.7	7.5	6.6	6.3	6.6	6.9	6.2	5.8	5.2	4.9	5.0	6.0
25	5.2	4.9	4.3	3.6	3.3	3.8	5.0	6.1	6.2	5.8	6.3	6.8	7.7	7.4	7.3	6.7	6.4	5.6	5.3	5.6	5.5	5.4	5.0	4.3	5.6
26	4.2	3.7	3.2f	3.1f	2.7f	2.8	3.9	4.5	5.3	5.4	6.0	6.6	7.1	7.8	7.6	6.2	6.3	6.2	5.9	6.6	5.6	3.9	3.5	3.5	5.1
27	3.4f	...f	...f	3.4f	3.3f	3.7f	5.0	4.6	4.8	5.2	5.9	6.6	p8.0	8.0	7.3	6.8	6.1	5.8	5.7	5.2	4.7	4.4	4.4f	4.1f	...
28	3.9	3.6	3.3	3.3	3.5	3.6	5.2	5.2	5.1	5.8	6.0	...c	...c	p8.0	7.6	p7.0	6.8	6.6	6.8	6.8	6.0	5.0	4.7	4.4	...
29	4.6	4.5	4.1	3.5	3.6	3.7	5.0	5.5	5.8	6.2	...c	...c	...c	...c	...c	6.9	6.2	6.2	5.8	5.6	5.2	4.2	3.6	3.7	...
30	3.8	3.8	3.7	3.6	3.7	3.6	5.0	5.5	6.0	6.4	7.0	9.0	8.0	7.6	7.3	6.6	6.4	6.1	5.5	5.8	5.4	4.5	4.3	4.3	5.5
31	4.2	4.3	4.1	4.0	3.6	3.5	4.1	4.4	4.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.4	4.9	4.8	4.7	...
MEAN*	3.9	3.8	3.7	3.4	3.2	3.3	4.4	5.1	5.5	5.9	6.4	6.8	7.2	7.4	7.1	6.6	6.3	6.0	5.7	5.3	4.8	4.2	4.1	4.0	5.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 308

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1944 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — OCTOBER 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	275	265	240	195	315	280	260	305	330	325	300	300	285	315	300	290	245	270	240	230	240	290	250	290	276
2	280	245	220	255	240	250	...c	...c	355	350	320	300	300	290	305	310	280	255	230	225	240	275	265	255	...
3	245	235	225	250	280	255	245	260	330	320	300	300	295	295	290	300	280	250	230	220	235	270	275	270	269
4	275	260	230	220	195	260	250	270	340	400	330	390	315	310	300	270	285	250	220	220	250	275	270	255	277
5	265	245	235	210	180f	260	245	230	280	290	330	310	345	300	270	270	260	260	235	215	230	235	265	260	259
6	250	245	235	215	250	230	240	260	270	p295	320	295	295	305	300	300	280	265	230	230	230	245	250	...a	...
7	285	260	255	220	265	270	240	260	265	350	350	320	305	290	290	280	270	260	230	230	235	245	260	255	270
8	265	250	235	210	...c	...c	...c	...c	...c	...c	...c	320	290	295	280	...a	235	260	...a	...a	260	245	250	250	...
9	240	250	...a	225	245	250	230	240	260	295	300	305	310	300	290	280	270	240	220	225	235	230	240	240	...
10	240	250	250	240	240	240	235	240	290	310	300	p305	310	300	295	290	280	260	230	240	230	240	255	265	264
11	250	240	210	200	260	265	245	255	310	325	...a	360	305	280	280	280	260	260	240	260	240	260	280	275	...
12	260	300	260	270	255	245	270	420	510	485	480	420	375	405	400	355	345	290	240	250	245	250	270	300	329
13	290	285	260	255	...a	260	240	300	285	325	305	335	340	305	300	275	280	...a	240	230	235	245	285	300	...
14	...a	...a	...a	230	245	250	245	280	280	295	310	330	300	p290	280	275	275	250	230	230	220	270	275	...a	...
15	...a	250	...a	...a	...a	290	430	575	385	...a	400	p440	430	420	440	440	390	365	...a	...a	250	295	275	...a	...
16	...f	290	...f	280f	285	270	235	235	...a	300	275	330	320	305	300	305	280	255	230	250	245	...a	...a	...a	...
17	...a	...a	245	250	310f	265	230	220	p325	...c	p400	375	345	340	320	305	290	285	250	250	265	265	245	240	...
18	230	260f	275	270	260	260	230	230	295	310	350	330	315	285	280	305	290	260	240	240	230	235	265	260	271
19	250	245	245	240	240	250	240	250	320	300	...c	...c	...c	...c	p300	280	280	260	245	230	215	255	265	260	...
20	...a	...a	...a	...a	245f	260	240	240	265	p285	310	330	320	300	300	280	270	250	230	225	...a	240	275	295	...
21	...a	...f	215f	270	260	260	225	240	340	p325	320	300	320	295	300	295	275	...a	...a	225	225	...a	...a	255	...
22	295	255	240	250	260	275	240	280	300	380	320	330	340	315	305	295	275	270	235	240	...a	250	255	280	...
23	260	...a	...a	240	...a	250	240	270	290	315	p310	p290	p275	300	290	285	290	270	235	225	235	245	260	255	...
24	...a	260	240	275	265	245	245	270	300	330	300	280	325	295	280	290	290	270	240	235	230	250	265	270	...
25	255	...a	200	240	290	280	235	270	280	320	320	345	310	305	300	270	265	260	230	...a	...a	280	245	260	...
26	245	260	240f	275f	260	275	235	370	320	420	370	325	...a	320	300	330	290	265	255	235	220	280	290	295	...
27	285	...a	...a	250f	265f	260	245	325	390	400	360	340	p300	300	295	295	280	270	240	230	240	260	260	290	...
28	...c	...c	205	...c	...c	p240	230	255	365	305	325	...c	...c	315	300	p290	285	...a	...a	...a	...a	...a	...a	270	...
29	240	...a	...a	235	250	250	240	255	295	310	...c	...c	...c	...c	...c	290	290	265	...a	240	225	230	255	...a	...
30	...a	260	...a	...a	260	...a	250	...a	345	320	360	290	300	290	300	300	290	260	240	235	220	245	260	280	...
31	260	255	240	225	260	265	235	400	400	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	245	250	250	260	...
MEAN*	261	257	236	241	257	259	247	286	321	333	333	329	318	309	303	298	284	266	235	233	236	256	263	269	276

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 309

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1944 — OCTOBER 1944

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.1	4.3	4.3	4.3	4.4	4.3	4.3	4.1	...	...	...
2	...	...	4.2	4.3	4.4	4.3	4.5	4.4	4.4	4.3	4.0	...	...
3	...	...	4.0	4.2	4.3	4.4	4.5	4.4	4.3	4.2	3.9	...	...
4	...	...	4.0	4.2	4.3	4.4	4.4	4.4	4.3	4.2	3.9	...	...
5	...	...	4.0	4.3	4.6	4.6	4.5	p4.4	4.4	4.2	3.9	...	...
6	...	...	4.1	p4.3	4.6	4.4	4.5	4.4	4.5	4.3	...	...	...
7	...	...	4.0	4.4	4.5	4.5	4.5	4.5	4.4	4.3	3.9	...	...
8	...	...	...c	...c	...c	4.5	4.5	4.5	4.4	...a	3.9	...	...
9	...	...	...	4.3	4.5	4.6	4.3	4.5	4.4	4.2	4.0	...	...
10	...	...	...	4.5	4.5	p4.5	4.5	4.3	4.4	4.3	3.9	...	...
11	...	...	4.1	4.2	...a	4.5	4.5	4.4	4.4	4.2	...	...	...
12	...	...	3.7	3.9	4.1	4.1	4.1	4.2	4.1	...a	3.9	...	...
13	...	...	3.9	4.2	4.3	4.3	4.4	4.3	4.3	4.3	...	...	...
14	...	...	4.1	4.4	4.3	4.5	4.5	p4.4	4.3	4.2	3.9	...	...
15	...	...	3.7	...a	3.9	q4.0	4.0	4.0	4.0	4.0	3.8	...	...
16	...	...	...	4.3	4.3	4.3	4.2	4.3	4.3	4.2	4.0	...	...
17	...	...	q3.9	...c	q4.2	4.2	4.3	4.2	4.2	4.0	4.0	...	...
18	...	...	3.9	4.3	4.4	4.3	4.4	4.4	4.3	4.2	4.0	...	...
19	...	...	4.2	4.2	...c	...c	...c	...c	q4.3	4.0	4.0	...	...
20	...	...	...	...c	4.5	4.4	4.5	4.5	4.4	4.3	4.0	...	...
21	...	...	...	q4.4	4.4	4.5	4.5	4.4	4.3	4.3	4.0	...	...
22	...	...	4.1	4.3	4.4	4.6	4.5	4.4	4.4	4.2	4.0	...	...
23	...	...	...	4.5	q4.4	p4.4	q4.5	4.5	4.4	4.2	3.9	...	...
24	...	...	4.2	4.3	4.5	4.5	4.5	4.6	4.4	4.3	4.1	...	...
25	...	...	4.1	4.3	4.4	4.4	4.4	4.4	4.5	4.3	3.9	...	...
26	...	...	4.0	4.0	4.3	4.4	...a	4.4	4.4	4.2	4.0	...	...
27	...	...	4.1	4.3	4.3	4.4	p4.4	4.4	4.4	4.2	4.0	...	...
28	...	...	4.4	4.4	4.5	...c	...c	4.5	4.5	4.3	4.0	...	...
29	...	...	4.4	4.4	...c	...c	...c	...c	...c	4.2	4.1	...	...
30	...	...	...a	4.6	4.4	4.4	4.6	4.5	4.4	4.2	4.1	...	...
31	...	...	4.2	...c	...c	...c	...c	...c	...c	...c	...c	...	...
MEAN*	...	...	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.2	4.0	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	235	235	195	205	175	245	220	225	...	...	...
2	...	...	235	215	215	215	200	...a	205	220	225	...	...
3	...	...	235	235	215	210	240h	230	215	205	225	...	...
4	...	...	230	230	210	200	205	220	220	230	220	...	...
5	...	...	235	225	195	190	215	p215	215	210	205	...	...
6	...	...	235	p230	230	195	220	210	245	235	...	...	...
7	...	...	225	225	220	...a	...a	225	210	...a	230	...	...
8	...	...	...c	...c	...c	...a	...a	...a	...a	...a	220	...	...
9	...	...	...	210	200	200	...a	220	215	210	220	...	...
10	...	...	...	...a	...a	...c	180	215	235	...a	225	...	...
11	...	...	210	...a	...a	200h	230	205	210	220	...	...	...
12	...	...	225	225	230	230	220	210	220	...a	240	...	...
13	...	...	230	200	200	195	180	205	220	230	...	...	...
14	...	...	235	...a	...a	195	200	p215	225	235	225	...	...
15	...	...	260	...a	200	...a	195	...a	235	240	220	...	...
16	...	...	...	...a	...a	190	195	200	240	...a	...a	...	...
17	...	...	q200	...c	q200	200	...a	...a	235	235	220	...	...
18	...	...	220	200	200	200	245	195	225	240	215	...	...
19	...	...	220	210	...c	...c	...c	...c	q185	215	210	...	...
20	...	...	...	...c	235	...a	...a	225h	220	215	220	...	...
21	...	...	...	q225	240	200	200	215	240	...a	...a	...	...
22	...	...	235	...a	...a	185	205	...a	225	240	230	...	...
23	...	...	210	210	q200	p195	q195	220	220	220	230	...	...
24	...	...	235	220	...a	...a	...a	185	225	200	230	...	...
25	...	...	240	...a	...a	200	...a	225	225	220	220	...	...
26	...	...	225	...a	...a	...a	...a	...a	...a	210	230	...	...
27	...	...	210	...a	205	220	p215	215	210	210	230	...	...
28	...	...	210	...a	210	...c	...c	200	q220	p225	230	...	...
29	...	...	...a	225	...c	...c	...c	...c	...c	220	225	...	...
30	...	...	...a	...a	...a	...a	225	230	200	220	225	...	...
31	...	...	220	...c	...c	...c	...c	...c	...c	...c	...c	...	...
MEAN*	...	...	228	220	211	201	207	215	221	222	224	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 310

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1944 OCTOBER 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.7	0.7	0.9	1.0	0.9	1.0	1.1	0.7	0.8	0.7	...	1.3	2.1	2.6	2.8	2.9	3.0	3.0	3.0	2.9	2.9	2.6	2.1	1.5
2	...	...c	0.7	0.7	1.0	1.0	0.9	0.7	0.7	0.7	0.7	0.5	...	...c	...c	2.7	3.0	3.0	3.2	3.1	3.1	3.3	...a	...a	...a	1.5
3	...	0.6	0.7	0.9	0.8	0.9	1.0	0.8	0.9	0.9	0.7	0.7	...	1.2	2.1	2.6	2.8	3.1	3.3	3.0h	3.0	3.1	2.9	2.7	2.1	1.5
4	...	0.7	0.7	1.0	1.0	1.0	0.8	1.0	0.9	0.8	0.8	0.7	...	1.4	2.0	2.6	2.8	3.0	3.0	3.1	3.2	3.0	2.9	2.6	2.1	...
5	...	0.7	0.8	0.9	1.0	1.0	1.0	p1.0	0.9	0.8	0.7	0.6	...	1.5	2.2	2.6	2.9	3.0	3.1	3.1	p3.2	3.2	3.1	2.7	2.1	1.4
6	...	0.7	1.1	p1.1	1.1	1.2	1.1	1.1	1.0	0.7	0.7	0.7	...	1.6	2.3	2.8	p3.0	3.2	3.2	3.2	3.2	3.2	3.1	2.8	2.8	...a
7	...	0.7	0.7	0.7	0.7	0.9	0.9	0.8	0.7	0.9	0.9	0.8	...	1.9	2.2	2.6	3.0	3.1	3.2	3.2	3.1	3.0	2.9	2.7	2.1	...a
8	...	...c	...c	...c	...c	1.0	0.9	1.0	0.9	0.9	0.8	0.7	...	...c	...c	...c	...c	...c	3.2	3.2	3.2	2.9	...a	2.7	...a	...a
9	...	0.6	q0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	...	1.6	2.4	2.7	2.8	2.9	3.0	3.1	3.0	2.9	3.0	2.7	2.3	...a
10	...	0.7	0.7	0.7	0.9	p0.9	1.0	0.9	0.9	0.9	0.7	0.7	...	1.5	2.3	2.7	3.0	3.2	p3.3	3.4	3.3	3.2	3.0	2.8	2.2	...
11	...	0.7	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.7	0.7	...	1.3	2.2	2.7	2.8	3.2	3.3h	3.2	3.2	3.2	3.1	2.7	2.2	...
12	...	0.7	0.7	0.8	0.9	1.0	1.0	0.7	0.9	0.9	0.7	0.6	...	1.6	2.2	2.6	2.9	3.1	3.2	3.2	3.2	2.8	...a	...a	2.1	...
13	...	0.7	0.7	0.8	1.0	1.0	1.0	0.8	0.7	0.8	0.7	0.7	...	1.7	2.2	2.7	3.0	3.0	3.3	3.0	3.2	3.2	3.2	2.7	2.1	1.3
14	...	0.7	0.9	0.8	0.9	1.0	q1.0	p0.9	q0.9	0.7	0.8	0.7	...	1.7	2.3	2.8	3.2	3.2	3.2	3.0	p3.1	3.2	3.0	2.7	2.3	...
15	...	0.7	0.7	0.7	0.9	q1.0	1.0	1.0	1.0	0.9	0.7	0.7	...	1.6	2.1	2.5	2.7	2.8	q3.0	3.2	2.7	3.0	3.0	2.6	2.5	...a
16	...	0.7	0.7	0.7	0.7	1.0	1.0	1.0	0.7	0.9	0.7	0.7	...	1.4	2.2	2.6	2.8	3.0	3.0	...a	2.6	...a	...a	...a	2.2	...a
17	...	0.7	q0.7	...c	q1.2	0.9	1.0	1.0	1.0	1.0	0.8	0.7	...	1.7	2.3	q2.5	...c	q3.0	2.9	3.0	3.0	3.1	2.8	2.6	2.3	...a
18	...	0.7	0.7	0.7	0.7	0.9	1.0	1.0	1.0	1.0	0.8	0.7	...	1.6	2.4	2.7	2.9	3.0	2.8	3.3	...a	3.2	3.0	2.7	2.4	1.5
19	...	0.7	0.7	0.9	...c	...c	...c	...c	0.9	0.7	0.7	0.7	...	1.9	2.3	2.7	3.0	...c	...c	...c	...c	3.1	3.1	2.6	2.2	1.5
20	...	0.7	0.7	p0.7	0.7	0.9	0.9	1.0	0.9	1.0	0.9	0.7	...	1.5	2.6	2.6	p2.9	3.2	3.2	3.3	3.2	3.2	3.0	2.7	2.3	1.6
21	...	0.7	0.9	q0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.7	...	2.0	2.4	2.8	q3.1	3.2	3.2	3.3	3.3	3.2	2.8	2.6	...a	...a
22	...	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.7	...	1.7	2.2	2.7	3.0	3.2	3.1	3.2	3.2	3.2	3.0	2.8	2.4	1.6
23	...	0.7	0.9	0.9	q1.1	p1.1	q1.1	1.0	0.9	0.9	0.9	0.7	...	1.9	2.3	2.8	3.0	q3.2	p3.2	q3.2	3.2	3.1	2.9	2.7	2.4	...
24	...	0.7	0.7	0.9	1.0	1.0	1.0	1.0	0.9	0.7	0.7	0.7	...	1.7	2.4	2.8	3.0	3.1	3.2	3.2	3.2	3.2	3.0	2.8	2.3	1.6
25	...	0.7	0.7	0.7	1.0	1.0	1.1	1.0	1.0	0.9	0.7	0.7	...	1.8	2.4	2.7	3.0	3.1	3.2	3.0	2.8	3.0	3.0	2.8	2.3	1.3
26	...	0.7	...c	1.0	1.0	1.1	1.0	1.0	0.9	0.7	0.7	0.7	...	1.6	2.5	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.0	2.7	2.3	1.7
27	...	0.7	0.7	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.7	...	1.8	2.4	2.8	3.1	3.3	3.3	p3.2	3.2	3.2	3.1	2.8	2.3	...
28	...	0.7	0.7	1.0	0.9	...c	...c	1.0	1.0	p1.0	1.0	q1.0	...	2.0	2.4	2.8	3.2	3.2	...c	...c	3.2	3.0	p2.9	2.8	2.3	...a
29	...	0.7	0.7	0.9	...c	...c	...c	...c	...c	0.9	0.7	0.7	...	1.9	2.4	2.8	3.0	...c	...c	...c	...c	...c	3.1	2.9	2.4	...a
30	...	0.7	p0.8	0.9	1.0	1.1	1.1	0.8	1.0	0.9	0.7	0.7	...	1.8	2.3	2.6	2.7	3.2	3.2	2.9	2.8	3.3	3.1	2.8	2.2	1.9
31	...	0.7	0.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	2.0	2.5	2.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
MEAN*	...	0.7	0.8	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.7	...	1.7	2.3	2.7	2.9	3.1	3.2	3.2	3.1	3.1	3.0	2.7	2.3	1.5

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 311

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — NOVEMBER 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.7	4.9	3.7	3.3	2.9	3.3	5.1	6.0	6.6	6.0	6.8	7.5	8.2	9.5	9.4	8.3	7.9	7.2	7.0	6.2	4.8	4.2	4.1	4.1	5.9
2	3.9	3.8	3.6	3.1	3.0	3.5	5.1	5.2	5.6	5.7	6.3	6.8	7.1	7.6	7.4	7.4	7.5	6.7	6.4	5.8	5.1	4.6	4.5	4.5	5.4
3	4.4	4.2	4.1	3.5	3.1	3.5	5.2	5.8	6.3	6.9	7.0	7.5	7.5	8.0	8.0	7.9	8.1	p8.0	7.7	6.2	5.5	4.8	4.7	4.7	5.9
4	4.8	4.7	4.3	2.5	2.6	3.3	4.2	4.7	5.0	5.9	6.2	6.4	7.3	7.8	8.1	7.6	7.3	7.1	7.0	6.4	5.5	5.4	5.3	5.7	5.6
5	p5.6	p5.5	p4.5	p2.8	p2.3	p3.5	4.6	5.8	6.2	6.1	6.6	...a	7.7	9.0	9.4	8.8	9.3	8.0	7.3	6.5	5.0	4.3	4.5	4.2	...
6	3.7	3.6	3.4	2.9	2.8	3.1	3.8	4.5	4.5	5.3	5.5	6.2	5.9	p5.7	6.0	6.1	6.0	p5.1	...c	...c	...c	...c	...c	4.1	...
7	4.3	4.3	3.5	2.8	2.7	3.0	4.0	4.7	5.3	5.5	5.8	6.0	6.5	6.3	6.3	6.5	6.5	6.7	6.2	5.5	5.3	4.7	4.5	p4.5	5.1
8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.2	6.6	p7.3	7.7	8.3	8.5	7.7	7.2	6.7	6.5	6.2	5.5	5.5	5.1	...
9	4.9	4.4	3.6	3.6	3.6	3.8	4.9	6.0	6.0	5.8	6.6	7.7	8.1	8.5	p9.1	...c	...c	6.3	6.0	p5.9	5.7	5.5	5.1	5.1	...
10	4.6	4.3	3.8	3.7	3.5	3.9	4.9	5.5	5.7	6.2	6.8	7.1	7.8	8.4	8.5	8.1	7.1	6.4	5.9	5.8	5.7	5.2	5.0	4.9	5.8
11	4.8	4.1	3.7	3.6	3.0	3.5	4.4	4.7	5.1	5.6	6.9	6.9	...c	...c	...c	7.0	6.3	6.1	6.0	5.8	5.6	4.8	4.3	...f	...
12	...f	3.8	3.3	3.3	3.1	3.8	4.6	5.2	5.4	5.5	6.5	7.6	8.7	8.8	8.2	7.1	6.7	6.7	6.2	6.1	5.7	4.8	4.5	4.4	...
13	4.3	4.2	3.8	3.3	2.5	3.3	5.0	5.4	6.0	5.5	6.1	6.9	7.2	8.5	9.2	9.7	9.5	8.9	7.5	5.8	5.1	4.7	4.6	4.4	5.9
14	4.1	3.9	3.6	3.3	2.6	3.3	4.8	5.0	5.1	6.0	5.7	6.5	7.5	8.5	8.9	8.9	8.6	7.8	7.2	6.2	5.8	5.3	5.0	4.7	5.8
15	4.5	4.2	3.5	3.3	3.2	3.5	5.2	5.8	5.8	5.9	6.6	7.6	8.8	9.2	8.9	8.8	8.3	6.6	6.2	6.6	6.0	p5.0	p4.7	4.3	5.9
16	3.9	3.9	3.7	3.2	2.9	3.8	5.0	5.6	6.4	6.4	6.4	7.6	8.9	8.9	8.2	8.2	8.7	p8.7	7.8	7.1	6.2	5.5	p5.2	4.8	6.1
17	4.6	4.5	4.0	3.9	3.4	3.6	4.6	5.6	5.4	...c	...c	6.8	7.0	7.0	6.9	7.1	7.1	6.6	6.2	6.0	5.4	5.3	5.2	4.8	...
18	4.7	4.4	4.1	3.8	3.7	3.7	4.4	4.8	5.2	4.9	...c	...c	6.9	7.7	7.3	7.2	6.7	6.7	6.4	5.6	5.6	5.2	5.1	4.8	...
19	4.9f	5.2	5.0	3.7	3.1	3.2	4.3	4.5	4.9	5.4	5.9	6.6	8.5	7.8	7.7	7.8	7.1	6.7	5.9	5.6	5.2	4.6	4.1	3.7	5.5
20	3.9	3.8	3.9	3.7	3.5	3.6	4.3	p5.2	p5.2	5.4	6.3	7.1	7.7	8.6	9.9	10.4	9.0	8.0	7.1	6.5	5.7	5.2	4.9	4.8	6.0
21	4.6f	4.5	4.0	3.5	2.8f	3.0	3.8	4.3	5.1	5.4	7.0	7.8	7.7	8.2	8.6	7.4	6.7	6.6	6.7	6.6	5.6	5.0	4.9	4.5	5.6
22	4.5	4.3	3.6	3.4	3.2	3.7	4.5	4.8	4.9	...a	6.3	...a	7.0	...a	8.2	8.0	7.8	7.2	6.6	6.6	6.3	5.1	4.2	4.0	...
23	4.1	4.3f	4.6f	3.8	3.4	3.9	4.9	5.2	5.3	5.9	5.8	6.6	7.6	8.2	8.9	8.6	8.3	8.3	8.0	7.1	6.4	5.1	4.6	4.3	6.0
24	4.3	4.3	4.0	3.7	3.9	3.9	4.5	4.8	5.7	...a	6.8	7.8	7.7	8.1	8.4	8.7	8.1	7.2	6.9	6.5	6.0	p6.0	5.2	5.0	...
25	4.6	4.6	4.0	3.4	3.1	3.8	4.3	4.9	5.3	6.1	6.7	7.0	7.4	7.7	7.6	7.4	7.7	8.0	7.4	6.8	5.9	4.6	4.1	3.6	5.7
26	...f	3.8f	3.8f	...c	...c	...c	...c	...c	...c	6.6	...a	...a	8.6	9.7	10.0	9.4	9.0	8.3	7.3	7.6	6.9	5.6	5.2	4.6f	...
27	...a	4.7f	...f	4.8	3.0	3.5	4.7	4.9	5.9	...a	7.1	...a	8.3	8.8	9.6	9.2	8.6	7.5	7.1	5.1	...c	...c	...c	...c	...
28	4.2f	4.0f	3.6f	3.3	2.9	3.3	4.9	6.1	6.3	5.9	5.6	5.5	5.9	6.3	6.7	6.8	6.7	6.6	6.1	5.7	5.2	...c	...c	4.1	...
29	4.0	3.8	3.8	3.3	3.5	3.8	4.6	4.7	5.1	...c	...c	...c	6.1	6.1	6.6	p6.9	7.0	6.7	6.1	5.7	5.7	5.1	4.4	4.1	...
30	3.9	4.0	3.9	4.0	3.4	3.7	4.9	5.5	6.2	5.7	6.3	6.0	6.9	7.7	8.4	9.0	9.2	9.1	8.0	6.8	6.5	5.9	5.3	4.8	6.0
31																									
MEAN*	4.4	4.3	3.9	3.4	3.1	3.5	4.6	5.2	5.6	5.8	6.4	6.9	7.5	8.0	8.2	8.0	7.7	7.2	6.8	6.2	5.7	5.1	4.8	4.5	5.7

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 312

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1944 NOVEMBER 1944

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	230	250	250	230	250	230	280	275	325	315	310	315	280	270	280	265	260	230	220	210	250	275	260	...
2	260	250	260	240	245	250	240	255	310	320	320	325	320	310	300	300	270	265	...a	...a	245	265	265	260	...
3	260	250	...a	...a	...a	245	250	270	290	300	280	315	290	310	300	300	275	p260	245	230	230	...a	270	280	...
4	...a	...a	230	250	270	250	225	345	365	335	330	340	...a	310	300	290	280	270	235	235	260	...a	290	300	...
5	p265	p250	p230	p220	p270	p250	235	...a	285	300	350	...a	...a	310	310	300	280	250	...a	...a	...a	275	280	265	...
6	270	...a	...a	...a	...a	295	245	360	535	365	430	380	395	p425	385	325	300	260	...c	...c	...c	...c	...c	265	...
7	260	225	215	230	260	260	290	335	310	330	360	365	310	310	310	315	300	265	235	230	230	240	...a	p270	...
8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	315	...a	...a	315	295	290	270	255	230	255	235	255	...a	260	...
9	235	225	245	250	260	240	230	265	270	330	330	300	315	290	p280	...c	...c	265	240	p240	245	240	...a	...a	...
10	...a	...a	250	240	230	235	230	265	310	305	280	330	300	290	285	280	270	265	235	240	240	250	270	250	...
11	235	...a	265	245	230	230	225	335	...a	...a	315	...a	...c	...c	...c	295	295	280	250	230	230	...a	...a	...a	...
12	...a	...a	...a	250	230	240	220	...a	305	360	355	340	295	290	275	300	280	265	250	225	220	...a	270	...a	...
13	250	...a	...a	240	230	...a	...a	280	270	320	...a	335	340	310	295	...a	255	240	230	...a	...a	...a	...a	...a	...
14	...a	245	240	210	...a	230	235	300	300	300	360	...a	315	305	280	275	270	250	235	220	230	250	250	270	...
15	250	...a	...a	270	260	245	250	245	290	...a	325	330	290	290	285	270	265	255	260	240	235	...a	...c	265	...
16	260	250	245	260	255	235	240	270	270	315	360	330	300	295	300	300	280	p260	240	...a	230	220	...a	...a	...
17	...a	255	265	240	230	245	260	280	335	...c	...c	310	310	305	...a	290	275	260	250	230	245	250	250	255	...
18	240	235	275	...a	250	...a	280	305	280	210	...c	...c	340	300	300	290	295	270	250	240	240	...a	...a	...a	...
19	...a	...a	...a	...a	230	240	260	...a	400	340	370	335	305	310	320	285	290	265	260	230	240	...a	255	275	...
20	285	270	245	225	225	220	225	...c	...c	390	330	320	350	335	300	275	265	250	240	260	...a	...a	285	...a	...
21	...a	280	...a	...a	...a	...a	215	240	340	...a	...a	...a	...a	300	290	280	285	...a	...a	...a	...a	...a	275	225	...
22	270	240	...a	255	250	220	220	235	375	...a	320	...a	...a	...a	300	295	265	260	255	...a	230	235	250	280	...
23	...a	...a	...a	255	275	225	240	250	305	325	375	330	315	325	300	290	290	270	250	235	220	230	245	265	...
24	290	...a	260	255	...a	245	225	240	300	...a	...a	310	315	320	305	...a	270	...a	...a	...a	...a	p260	250	250	...
25	275	230	235	225	250	260	225	360	330	345	320	320	325	310	p310	310	290	265	250	230	...a	235	250	290	...
26	...a	...a	265	...c	...c	...c	...c	...c	...c	...a	...a	...a	...a	320	290	290	295	265	...a	...a	...a	...a	...a	...a	...
27	...a	...a	...a	200	205	...a	230	240	...a	...a	...a	...a	...a	...a	295	285	275	270	240	245	...c	...c	...c	...c	...
28	...a	...a	255	270	260	235	290	290	300	300	390	400	375	370	345	305	300	280	265	...a	...a	...c	...c	255	...
29	260	270	255	...a	...a	230	325	395	370	...c	...c	...c	...a	370	335	p320	300	295	250	...a	...a	245	245	285	...
30	270	270	240	255	235	235	265	300	270	365	345	365	345	345	325	315	295	270	...a	230	225	240	250	245	...
31																									
MEAN*	261	248	249	242	245	242	245	289	319	324	340	334	322	317	303	294	281	264	245	235	234	246	262	265	275

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = $f^{0}F2$ EQUAL TO OR LESS THAN $f^{0}F1$ h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 313

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1944 NOVEMBER 1944

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.2	4.4	4.5	4.4	4.6	4.4	4.5	4.4	4.0	...	...
2	...	...	4.2	4.4	4.4	4.5	4.5	4.5	4.5	4.2	4.0	...	...
3	...	...	4.5	4.5	...a	...a	4.5	4.5	4.6	4.4	4.2	...	...
4	...	...	4.2	4.3	4.5	4.5	...a	4.5	4.5	4.2	4.0	...	...
5	...	...	4.1	4.4	4.7	...a	...a	4.5	4.5	4.3	4.1	...	...
6	...	...	4.0	4.1	4.2	4.3	4.3	q4.3	4.2	4.1	4.0	...	...
7	...	q3.7	4.0	4.2	4.5	4.5	4.6	4.4	4.4	4.3	4.1	q3.6	...
8	...	...	...c	...c	4.1	...a	...a	4.4	4.4	4.3	4.0	...	...
9	...	q3.9	4.1	4.5	4.4	4.5	4.5	4.4	...c	...c	...c	...	...
10	...	...	4.4	4.3	4.4	4.5	4.4	4.4	4.2	4.2	4.1	...	...
11	...	...	...a	...a	4.3	...a	...c	...c	...c	4.2	3.9	...	...
12	...	...	4.2	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.0	...	...
13	...	...	4.1	4.3	...a	4.5	4.5	4.3	...a	...a	4.0	...	...
14	...	...	...	4.2	4.4	...a	...a	4.3	4.4	4.2	4.0	q3.5	...
15	...	...	4.2	...a	...a	4.5	4.5	4.5	...a	4.2	4.0	...	...
16	...	...	4.2	4.4	4.5	4.5	4.5	4.4	4.3	4.1	4.0	...	...
17	...	q3.8	4.2	...c	...c	4.5	4.5	4.5	...a	4.3	4.0	...	...
18	...	q3.8	4.1	4.3	...c	...c	4.4	4.4	4.4	4.3	...a	q3.8	...
19	...	...	...a	...a	4.3	4.4	4.4	4.5	4.3	4.0	4.0	...	...
20	...	...	...c	...a	4.4	4.4	4.5	4.4	4.4	4.2	4.1	q3.5	...
21	...	...	...a	...a	...a	...a	...a	4.4	4.4	4.3	4.1	...	...
22	...	...	...a	...a	4.4	...a	...a	...a	...a	4.2	4.1	q3.8	...
23	...	...	4.2	...a	...a	4.4	4.4	4.5	4.5	4.3	4.1	q3.7	...
24	...	...	4.2	...a	...a	4.5	4.5	4.5	4.4	...a	4.2	...	...
25	...	q4.1	4.2	4.3	4.4	4.5	4.5	4.6	p4.5	4.3	4.1	...	...
26	...	...	...	...a	...a	...a	...a	...a	4.4	4.3	4.3	...	...
27	...	...	...a	...a	...a	...a	...a	...a	4.4	4.3	4.1	q3.8	...
28	...	q4.0	4.2	4.3	4.4	4.4	4.5	4.4	4.3	4.2	4.0	q3.7	...
29	...	q3.9	4.1	...c	...c	...c	...a	4.5	4.3	p4.2	4.1	q3.8	...
30	...	...	4.2	4.5	4.5	4.5	4.6	4.5	...a	...a	4.1	q3.8	...
31													
* MEAN	...	3.9	4.2	4.3	4.4	4.5	4.5	4.4	4.4	4.2	4.1	3.7	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	230	215	200	200	200	200	205	210	230	...	...
2	...	...	235	200	195	185	...a	...a	...a	220	...a	...	...
3	...	...	260	250	...a	...a	195	210	...a	220	250	...	...
4	...	...	240	240	...a	...a	...a	210	220	230	240	...	...
5	...	...	...a	...a	...a	...a	...a	240	230	235	220	...	...
6	...	...	240	...a	...a	...a	...a	...a	220	225	245	...	...
7	...	q220	220	q215	245h	200	220	210	200	220	250	q225	...
8	...	...	...c	...c	...a	...a	...a	...a	200	...a	225	...	...
9	...	q235	220	200	180	210	200	180	...c	...c	...c	...	...
10	...	...	220	200	195	210	210	180h	195	220	220	...	...
11	...	...	...a	...a	...a	...a	...c	...c	...c	225	210	...	...
12	...	...	...a	...a	235	200	...a	230	220	240h	220	...	...
13	...	...	245	200	...a	220	245	...a	...a	...a	...a	...	...
14	...	...	...	225	220h	...a	...a	205	215	220	230	q225	...
15	...	...	220	...a	...a	195	...a	...a	...a	225	210	...	...
16	...	...	220	215	...a	...a	...a	...a	220	220	240	...	...
17	...	q245	215	...c	...c	215	205	195	...a	...a	240	...	...
18	...	q210	...a	...a	...c	...c	235	245	...a	250	...a	...	...
19	...	...	...a	...a	220	220	200	240	215	220	q230	...	...
20	...	...	...c	...a	230	...a	185	195	245	...a	...a	...	...
21	...	...	...a	...a	...a	...a	...a	225	...a	...a	240	...	...
22	...	...	...a	...a	...a	...a	...a	...a	...a	...a	255	q225	...
23	...	...	...a	...a	...a	220	210	...a	...a	230	225	q240	...
24	...	...	...a	...a	...a	195	220	225	...a	...a	240h	...a	...
25	...	q240	...a	...a	190	195	190	...a	...c	215	220	...	...
26	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...	...
27	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	q220	...
28	...	...a	...a	215	210	...a	...a	...a	...a	225	235	q230	...
29	...	q230	250	...c	...c	...c	...a	...a	...a	...a	...a	...a	...
30	...	...	225	210	200	285h	210	...a	...a	...a	...a	q230	...
31													
* MEAN	...	230	231	215	210	211	209	213	215	225	232	228	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 314

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1944 | NOVEMBER 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	p0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.0	0.9	0.7	0.7
2	0.5	0.7	0.7	0.7	0.9	0.7	1.0	1.0	0.7	0.7	0.7	0.7	...
3	0.7	0.7	0.7	0.9	1.0	1.1	1.0	1.0	0.9	0.9	0.9	p0.8	0.7
4	0.7	0.7	0.7	0.7	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.7	0.7
5	...e	0.7	0.7	0.9	1.0	0.9	1.1	1.0	1.0	0.9	0.7	0.7	...a
6	0.6	0.7	0.7	0.9	0.9	1.0	1.0	q1.1	0.9	1.0	0.7	0.6	...
7	0.5	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.7	...
8	...c	...c	...c	...c	0.9	1.0	p1.0	1.0	0.9	0.9	0.8	0.7	0.7
9	0.7	0.7	0.7	0.9	0.9	1.0	1.1	0.9	...c	...c	...c	0.7	0.6
10	0.7	0.7	0.7	1.0	1.0	1.0	1.1	1.0	1.0	0.9	0.7	0.7	0.7
11	0.7	0.7	0.9	0.9	1.0	q1.1	...c	...c	...c	1.0	0.7	0.6	...
12	0.7	0.7	0.7	0.8	1.0	1.0	1.0	0.9	0.9	0.9	0.7	0.7	0.7
13	0.5	0.7	0.9	1.0	0.9	1.1	1.0	1.0	1.2	0.9	0.9	0.7	0.6
14	0.7	0.7	0.7	0.9	0.9	1.1	1.1	1.1	0.9	0.9	0.7	0.7	0.6
15	0.6	0.7	0.7	0.9	0.9	0.9	0.9	1.0	0.9	0.7	0.9	0.7	0.6
16	0.7	0.7	0.7	0.7	0.9	1.0	1.0	1.0	0.9	0.8	0.7	0.7	0.6
17	0.7	0.7	0.9	...c	...c	1.1	0.7	0.7	0.9	0.7	0.7	0.7	0.6
18	0.7	0.7	0.7	0.7	...c	...c	1.0	1.0	0.7	0.7	0.7	0.7	0.6
19	0.7	0.7	0.8	1.0	1.1	1.1	1.1	1.1	1.2	1.1	1.1	0.8	0.7
20	q0.7	q0.8	p0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.7	0.7	0.7
21	0.7	0.7	0.7	1.0	1.0	1.0	1.1	1.1	1.1	1.0	0.9	0.7	0.7
22	0.6	0.7	0.7	1.0	1.1	0.9	0.7	0.7	1.1	1.0	1.0	0.7	0.6
23	...e	0.7	0.7	0.7	0.7	1.1	1.0	0.9	1.0	0.7	0.7	0.7	0.7
24	0.5	0.7	0.7	0.7	0.7	0.9	0.7	0.7	1.0	1.0	0.7	q1.2	0.7
25	0.7	0.7	0.7	0.7	1.0	0.7	0.7	0.9	...c	...c	0.7	0.7	0.7
26	...c	...c	...c	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.7	0.7
27	0.7	0.7	1.0	1.0	1.1	1.1	1.1	0.9	0.9	0.9	0.7	0.9	0.7
28	0.7	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.7	0.7
29	0.7	0.7	0.7	...c	...c	...c	1.1	0.8	0.7	p0.7	0.7	0.7	0.7
30	0.7	0.7	0.9	1.1	1.1	1.0	1.1	1.0	1.1	1.0	1.0	0.7	0.7
31													
MEAN*	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.9	2.5	2.9	2.9	3.3	3.3	3.2	3.2	3.2	3.2	2.8	2.3	1.6
2	1.9	2.4	2.9	3.2	3.3	3.3	3.3	...a	...a	3.0	...a	...a	...
3	1.8	2.4	2.9	3.3	3.3	3.4	3.4	3.4	3.3	3.0	2.7	p2.7	...a
4	1.9	2.4	2.9	3.1	3.3	3.3	3.3	3.3	3.2	3.0	2.8	2.4	1.6
5	2.0	2.4	2.9	3.1	3.3	3.3	3.3	3.3	3.0	3.0	2.9	2.7	...a
6	1.6	2.4	2.9	3.3	3.3	3.3	3.3	q3.3	3.3	2.8	2.7	1.9	...
7	1.9	2.4	2.8	3.1	3.2	3.3	3.2	3.2	3.2	3.1	2.8	2.4	...
8	...c	...c	...c	...c	3.3	3.3	p3.2	3.2	...a	...a	...a	2.5	1.7
9	2.0	2.5	2.9	2.7	3.1	3.3	3.3	3.3	...c	...c	...c	2.3	1.6
10	2.1	2.4	2.9	3.0	3.3	3.3	3.3	3.2	3.2	2.8	2.8	2.4	1.6
11	2.1	2.5	2.9	3.2	3.3	...a	...c	...c	...c	3.0	2.9	2.7	...
12	2.0	2.5	2.8	3.0	3.3	3.3	3.2	3.2	3.2	3.1	2.8	2.3	1.6
13	...a	2.5	2.9	3.1	3.3	3.3	...a	...a	...a	...a	...a	...a	...a
14	1.9	2.5	2.9	3.3	3.3	3.3	...a	3.1	3.0	3.1	2.9	2.4	1.7
15	2.1	2.6	3.0	3.1	3.2	3.3	3.3	3.3	...a	3.1	3.1	2.3	2.1
16	...a	2.4	3.0	3.1	3.3	3.4	3.3	...a	...a	3.0	2.8	2.4	1.7
17	2.0	2.6	3.0	...c	...c	3.0	3.2	3.2	...a	...a	2.9	2.4	2.3
18	...a	2.5	2.9	...a	...c	...c	3.3	3.5	3.3	3.2	2.8	2.4	1.6
19	2.0	2.5	3.0	3.2	...a	...a	3.2	3.2	3.2	3.1	2.9	2.4	...a
20	2.0	2.5	2.7	...a	3.3	...a	3.2	3.2	...a	...a	2.8	...a	...a
21	2.1	2.5	2.9	3.2	3.3	3.3	3.2	3.2	...a	...a	...a	...a	...a
22	1.9	2.5	2.8	3.3	3.2	3.2	3.2	...a	...a	...a	2.8	2.5	...a
23	1.9	2.5	2.9	3.2	3.3	3.2	3.2	...a	...a	3.1	3.0	2.4	1.8
24	2.0	2.6	2.9	3.2	3.2	3.2	3.0	3.5	3.3	3.1	2.8	2.5	1.8
25	1.9	2.4	2.9	3.0	3.2	3.1	3.2	3.2	...c	...c	2.9	...a	...a
26	...c	...c	...c	3.2	3.3	...a	...a	3.3	3.2	2.9	2.8	2.8	1.6
27	2.2	2.4	...a	...a	3.3	3.4	3.4	3.3	3.3	2.9	2.6	2.8	1.9
28	1.9	2.5	2.8	3.2	3.3	3.3	...a	3.3	...a	3.1	2.9	2.5	1.8
29	2.0	2.5	3.0	...c	...c	...c	3.1	3.2	2.9	p2.7	2.5	2.0	1.2
30	2.0	2.5	2.9	3.2	3.1	2.8	2.9	3.0	3.3	3.1	2.8	2.4	1.6
31													
MEAN*	2.0	2.5	2.9	3.1	3.3	3.3	3.2	3.2	3.2	3.0	2.8	2.4	1.7

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 315

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1944 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — DECEMBER 1944

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.2	4.2	4.4	3.5	3.4	3.5	4.2	4.9	4.7	4.7	5.5	5.7	5.9	6.2	6.2	6.5	6.5	7.0	6.6	6.3	5.8	5.2	4.7	4.6	5.2
2	4.5	4.3	3.9	3.8	3.6	3.7	4.8	...a	...a	...a	6.1	6.7	7.6	7.7	7.4	7.3	7.5	7.1	7.5	7.2	6.8	6.0	5.7	5.1	...
3	5.0	4.7	4.1	3.8	3.8	4.0	4.4	4.5	...a	...a	5.6	5.7	6.0	7.1	...a	...a	6.5	5.9	5.9j	5.6	5.6	4.8	4.3	3.8	...
4	4.0	4.0	4.6	4.0	3.9	3.9	4.3	4.5	4.9	p5.1	5.8	6.1	7.3	7.8	...c	...c	...c	...c	...c	...c	...c	5.6	4.7	4.1	...
5	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.4	6.0	6.9	7.6	8.0	8.6	8.6	7.9	7.8	7.2	7.2	6.4	6.0	5.8	5.4	...
6	5.4	5.0	3.9	3.1	2.7	3.6	4.8	5.4	5.3	5.3	5.6	6.3	7.2	7.8	7.3	7.3	6.8	6.5	5.8	6.2	6.5	p5.6	5.1	5.1	5.6
7	5.0	4.6	4.2	3.7	3.7	4.3	5.4	4.8	4.9	...a	5.1	...a	...a	...a	6.2	...a	6.5	6.7	6.4	5.6	5.2	4.2	3.9	3.8	...
8	3.9	3.8	3.6	3.4	3.2	3.4	4.6	5.0	5.1	5.5	6.0	6.1	6.6	7.3	7.7	8.0	7.9	8.1	8.1	...c	...c	...c	...c	...c	...
9	...c	3.8	3.7	5.0	4.4f	4.3	4.3	4.8	5.1	5.4	5.7	6.7	6.7	7.9	8.3	...c	...c	6.0	5.9	6.1	5.7	5.0	4.5	4.6	...
10	4.7	4.1	4.5	3.8	3.8	4.2	5.4	6.8	6.9	6.6	7.0	8.1	8.8	8.5	8.5	8.4	7.9	7.2	6.8	6.6	6.6	5.8	5.2	4.5	6.3
11	4.5	4.3	p4.0	...c	...c	...c	...c	...c	4.9	4.9	5.5	5.8	6.0	5.9	6.0	p6.0b	6.0	5.9	5.9	6.0	5.9	5.2	4.8	4.9	...
12	4.8	4.6	4.0	3.6	3.2	3.8	5.0	5.5	6.7	...a	7.7	7.8	p8.7	8.9	8.7	8.4	8.6	7.7	7.6	6.6	6.0	5.3	5.3	5.1	...
13	5.0	4.5	4.1	3.6	3.2	3.6	4.2	4.8	5.3	5.9	6.7	7.3	8.2	9.3	9.7	p8.6	8.0	7.8	6.0	5.8	6.1	5.6	5.4	5.7	6.0
14	5.7	4.8	3.9	3.8	4.0	3.8	4.3	4.0	4.5	4.8	5.4	6.1	6.7	7.0	6.6	6.2	5.9	5.8	6.0	5.8	5.2	5.1	4.6	4.6	5.2
15	4.5	4.2	3.9	3.2	3.1	...c	...c	...c	...c	5.3	5.5	5.5	5.7	5.8	5.9	6.3	6.4	6.2	6.0	...a	5.3	5.0	4.7	5.3	...
16	4.4	...f	4.5	4.1	3.0	3.2	5.2	5.0	5.5	6.7	6.9	8.1	7.2	8.1	8.2	8.4	8.7	8.0	7.7	p7.6	7.0	6.3	4.9	4.8	...
17	3.9	2.8	1.9	2.0	1.9	2.2	3.2	...g	...g	...g	...g	...g	...g	...g	...g	4.7	4.6	4.8	4.8	5.5	5.4	5.8	4.7	4.6	...
18	3.2	...a	...a	...a	...a	...a	3.3	3.5	...g	...g	...g	...a	...c	...c	4.8	4.9	4.9	5.4	5.3	5.0	5.3	4.7	4.2	4.3	...
19	4.0	3.9	3.8	3.4	2.9	3.4	4.5	5.0	...g	p4.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.5	5.6	5.7	5.9f	...
20	5.7f	5.5	5.1	4.7	3.7	3.5	4.3	4.3	...a	...a	5.8	6.7	6.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.1	6.7	7.4	8.1j	8.7j	8.7	8.0	7.4	6.5	6.3	6.1	6.8	6.5	6.0	5.3	...
22	5.6f	5.0f	3.9	...a	3.3	3.1	4.3	4.8	5.3	5.5	6.3	6.3	6.6	6.7	6.7	6.8	6.9	p6.2	6.4	6.4	6.0	5.9	5.0	4.9	...
23	4.9	4.9	4.9	4.6	4.2	3.8	4.6	4.8	5.6	5.9	7.0	6.6	6.5	6.7	6.7	7.3	6.9	6.6	6.7	6.6	6.2	5.3	5.0	4.9	5.7
24	5.2	4.6	4.8	4.5	3.9	4.0	4.8	4.7	...g	5.2	5.8	6.6	7.1	7.3	7.1	6.5	6.5	6.9	6.6	6.0	5.7	5.6	5.4	5.5	...
25	5.5	...f	...f	4.3	3.6	3.7	5.1	5.9	6.2	6.3	7.1	7.6	8.4	9.2	9.0	9.2	8.2	7.2	7.2	p6.8	6.4	5.7	5.3	4.7	...
26	...f	4.6	3.5	3.7	3.4	3.6	4.9	5.0	5.7	6.9	6.9	7.1	6.9	...a	8.0	7.8	6.9	...a	6.6	6.6	6.5	5.8	5.4	5.4	...
27	4.5	4.7	3.7	3.5	3.5	3.0	3.8	p4.5	5.3	5.4	5.8	5.3	p5.7	7.3	7.2	p7.3	6.8	6.6	6.8	7.0	7.5	7.6	7.0	6.4	5.7
28	4.8	3.2	2.7	2.3	2.1	2.9	3.8	4.7	4.7	5.0	...a	...a	p5.7	5.4	5.5	p5.6	5.4	5.7	6.2	5.6f	5.4f	4.6f	4.3f	...f	...
29	...f	...f	...f	...f	1.9f	2.6	4.1	4.6	4.9	6.0	7.0	7.1	7.3	7.5	7.2	7.3	7.2	6.6	6.0	5.5	5.4	5.4	4.8	4.4	...
30	...f	...f	2.9	2.5	2.1	3.1	5.4	5.5	7.0	8.3	8.8	7.2	8.4	8.0	7.7	7.5	6.7	6.1	5.7	5.7	6.0	5.8	6.1	6.3	...
31	5.4	2.7	2.0	2.0	...c	...c	...c	...c	...c	7.9	7.8	7.8	8.1	8.0	8.9	8.9	8.0	6.4	5.9	p5.3	5.3	5.1	5.2	5.5	...
MEAN*	4.7	4.3	3.9	3.6	3.3	3.5	4.5	4.9	5.4	5.8	6.3	6.7	7.1	7.5	7.4	7.3	6.9	6.6	6.4	6.2	6.0	5.5	5.1	5.0	5.6

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 316

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1944 | DECEMBER 1944

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	...a	...a	260	255	...a	245	325	420	530	375	340	375	370	360	335	325	290	280	230	270	255	260	...a	...
2	265	250	225	240	255	265	260	...a	...a	...a	340	360	320	310	320	315	305	300	275	260	230	260	240	...a	...
3	...a	...a	255	295	255	255	265	250	...a	...a	380	...a	395	325	...a	...a	310	320	285	275	255	250	310	305	...
4	...a	...a	260	...a	260	250	250	220	400	p390	380	390	340	320	...c	...c	...c	...c	...c	...a	...a	240	255	265	...
5	...c	...c	...c	...c	...c	...c	...c	...c	305	285	355	335	335	320	310	300	275	275	270	240	...a	...a	260	260	...
6	235	225	240	255	...a	245	255	...a	310	520	395	360	335	305	325	290	300	270	275	280	240	p240	245	275	...
7	265	260	250	270	...a	260	240	240	350	...a	...a	...a	...a	...a	...a	...a	...a	280	...a	...a	240	275	...a	...a	...
8	...a	265	225	255	260	...a	...a	230	330	345	...a	...a	350	320	310	295	295	290	260	...c	...c	...c	...c	...c	...
9	...c	270	290	260	...a	245	245	...a	...a	415	400	335	380	325	320	...c	...c	300	280	230	225	240	265	270	...
10	260	...a	...a	...a	...a	...a	240	295	300	320	345	320	310	315	310	290	270	285	260	240	...a	...a	250	280	...
11	...a	250	p250	...c	...c	...c	...c	...c	425	530	380	375	370	355	350	p285b	335	335	280	235	230	240	...a	280	...
12	280	255	250	...a	260	240	250	340	310	320	320	...a	p325	300	310	...a	265	270	250	225	260	280	280	270	...
13	255	250	...a	...a	...a	...a	...a	245	380	450	355	360	350	325	...c	...c	...c	265	280	240	250	255	...a	...a	...
14	...a	...a	...a	...a	290	255	245	215	510	540	480	...a	...a	370	380	365	355	340	290	...a	265	250	285	280	...
15	...a	285	270	...a	270	...c	...c	...c	...c	430	...a	...a	440	405	380	355	...a	330	...a	...a	...a	...a	...a	...a	...
16	...a	...a	...a	235	245	270	245	245	...a	330	360	315	385	330	340	325	320	325	300	p305	310	330	330	300	...
17	325	370	430	400	340	350	260	...g	...g	...g	...g	...g	...g	...g	...g	585	500	440	430	275	260	255	280	280	...
18	...a	...a	...a	...a	...a	...a	280	240	...g	...g	...g	...a	...c	...c	570	...a	...a	360	340	...a	...a	...a	285	...a	...
19	250	...a	250	...a	250	255	260	290	...g	p600	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...a	260	...a	310	...
20	260	270	235	240	245	260	265	245	...a	...a	...a	335	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...	...	...	370	370	350	330	330	290	300	290	315	280	260	265	...a	220	270	...
22	260	280	...a	...a	310	...a	400	380	350	370	340	350	370	340	340	330	...a	p295	290	245	240	240	260	...a	...
23	280	280	270	270	245	260	270	410	330	370	330	300	375	320	350	310	305	...a	280	235	225	245	280	275	...
24	270	...a	235	...a	...a	...a	270	330	...g	460	400	355	325	330	310	310	320	285	260	235	250	260	...a	...a	...
25	335	...a	...a	260	260	...a	...a	...a	...a	...a	320	...a	340	305	315	275	...a	275	280	p275	...a	270	270	270	...
28	...a	280	280	260	250	230	240	230	335	...a	...a	300	380	...a	...a	...a	...a	...a	...a	...a	...a	...a	265	...a	...
27	245	235	290	305	265	255	470	365	345	395	400	490	530	350	345	...a	...a	310	295	270	280	280	290	270	...
28	...a	290	260	265	310	290	250	350	395	430	...a	...a	p355	450	395	p395	395	340	305	...a	265	265	270	...a	...
29	...a	280	280	265	270	...a	...a	410	425	345	330	...a	365	325	340	...a	290	280	270	255	260	270	270	270	...
30	...a	...a	275	290	265	...a	250	305	320	320	280	415	330	310	310	300	285	295	310	250	275	270	265	250	...
31	230	190	285	260	...c	...c	...c	...c	...c	300	315	340	320	335	320	285	280	...a	...a	...a	275	280	280	270	...
MEAN*	268	266	267	271	268	262	271	293	363	407	361	354	361	336	343	329	317	307	289	253	256	261	270	276	302

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 317

DECEMBER 1944 — DECEMBER 1944

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	3.8	4.2	4.4	4.3	4.4	4.4	...a	4.3	4.2	4.0	3.8	...
2	...	...	...a	...a	4.3	4.4	4.5	4.5	4.4	4.3	4.0	3.8	...
3	...	...	...a	...a	...a	...a	4.4	...a	...a	...a	...a	3.7	...
4	...	...	...c	...c	q4.5	4.6	4.7	4.5	...c	...c	...c	...c	...
5	...	...	4.2	4.3	4.5	4.4	q4.6	4.3	4.5	4.2	4.0	3.6	...
6	...	...	4.4	4.4	4.5	q4.5	4.5	4.5	4.3	4.2	4.2	3.7	...
7	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
8	...	...	4.3	4.3	...a	...a	4.5	4.5	4.4	4.3	4.3	3.7	...
9	...	...a	...a	4.3	4.6	4.5	4.4	4.5	...a	...c	...c	3.9	...
10	...	...a	4.4	...a	...a	4.6	4.6	4.6	4.5	4.4	4.3	4.0	...
11	...	...	4.1	4.4	4.3	4.5	4.5	4.5	4.5	p4.4b	4.2	4.0	...
12	...	4.2	...a	4.5	...a	...a	...a	...a	4.5	...a	4.2	3.9	...
13	...	...	...a	4.6	4.6	4.6	4.7	4.6	...c	...c	...c	3.8	...
14	...	...	4.0	4.2	4.3	...a	...a	...a	...a	4.3	4.3	3.8	...
15	...	...	...c	4.3	...c	...a	4.5	4.5	4.5	4.3	...a	...a	...
16	...	...	...a	...a	...a	4.6	4.7	4.6	4.6	4.5	4.2	4.0	...
17	...	3.4	3.7	3.9	4.1	4.2	4.2	4.3	4.1	4.1	4.0	3.8	...
18	...	...	3.8	4.0	4.1	...a	...c	...c	4.3	...a	...a	3.8	...
19	...	...	4.5	q4.6	...	...	...	...	...	...	...	...	...
20	...	...	...a	...a	...a	...a	...	...	...	...	...	...	...
21	...	...	...c	4.5	4.6	4.7	...a	4.7	...a	4.4	4.3	4.2	...
22	...	3.9	4.2	4.3	4.5	4.6	4.7	4.7	4.6	4.5	...a	...	...
23	...	4.0	4.3	4.4	4.5	4.7	4.7	...a	4.6	4.4	4.3	...a	...
24	...	...	4.4	4.4	4.5	4.5	...a	4.6	4.6	4.6	4.4	4.0	...
25	...	...	...a	...a	...a	...a	4.7	4.7	4.5	4.4	...a	...	...
26	...	...	4.4	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
27	...	4.0	4.0	4.3	4.3	4.5	4.4	4.5	4.4	...a	...a	3.9	...
28	...	3.9	4.2	4.1	...a	...a	q4.4	4.5	4.4	p4.3	4.2	3.9	...
29	...	3.9	4.0	4.3	4.4	...a	4.7	4.5	...a	...a	4.2	3.9	...
30	...	...	4.3	4.3	4.6	4.7	4.5	4.4	4.4	4.3	4.2	4.0	...
31	...	...	...c	4.3	4.5	4.5	4.7	...a	4.4	4.3	4.1	...a	...
*MEAN	...	3.9	4.2	4.3	4.4	4.5	4.6	4.5	4.4	4.3	4.2	3.9	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	210	225	225	245	290h	...a	...a	...a	220	230	250	...
2	...	...	...a	...a	...a	...a	...a	220	...a	...a	215	...a	...
3	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	230	...
4	...	...	...c	...c	...c	220	240	p210	...c	...c	...c	...c	...
5	...	...	235	220	220	200	q245	210	210	...a	...a	...a	...
6	...	...	220	205	220	200	230	220	210	...c	...c	...c	...
7	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
8	...	...	240	235	...a	...a	...a	...a	240	220	245	215	...
9	...	...a	...a	225	215	...a	205	...a	...a	...c	...c	230	...
10	...	...a	...a	...a	...a	225	...a	...a	...a	225	215	245	...
11	...	...	220	240	...a	225	...a	...a	215	p220b	230	220	...
12	...	250	...a	...a	...a	...a	...a	...a	...a	...a	230	230	...
13	...	...	...a	260	255	215	225	265	...c	...c	...c	220	...
14	...	...	200	205	...a	...a	...a	...a	...a	...a	...a	...a	...
15	...	...	...c	215	...a	...a	...a	...a	...a	...a	...a	...a	...
16	...	...	...a	...a	...a	...a	...a	230	220	...a	245	245	...
17	...	290	220	260	...a	225	...b	...a	245	...a	230	245	260
18	...	...	195	285h	...a	...a	...c	...c	...a	...a	...a	...a	...
19	...	...	280	q250	...	...	...	...	...	...	...	...	...
20	...	...	...a	...a	...a	...a	...	...	...	...	...	...	...
21	...	...	...c	230	250	...a	...a	2230	...a	205	...a	...a	...
22	...	...a	240h	220	...a	225	...a	200	250	...a	...a	...	...
23	...	...a	225	200	210	...a	210	...a	205	245h	220	...a	...
24	...	...	220	220	210	220	...a	...a	...b	200	220	215	...
25	...	...	...a	...a	...a	...a	...a	235	210	...a	...a	...	...
26	...	...	260	...a	...f	...a	...a	...a	...a	...a	...a	...e	...
27	...	...a	...a	210	225	240	225	...a	...a	...a	...a	...a	...
28	...	235	260	205	...a	...a	q250	245	230	p240	250	240	...
29	...	205	200	...a	235	...a	270	...a	...a	...a	210	210	...
30	...	...	225	300	215	190	165	180	...a	205	...a	230	...
31	...	...	...c	200	...a	210	210	...a	250	280	...a	...a	...
*MEAN	...	238	229	230	227	222	225	222	226	226	228	230	260

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 318

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1944 — DECEMBER 1944

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	0.7	0.9	1.0	0.9	0.9	0.9	0.7	0.7	0.6	0.7	0.6	...a	2.5	3.0	3.3	3.3	3.4	3.4	3.4	3.3	3.0	2.8	2.5	1.9
2	...e	0.7	0.7	0.7	0.7	0.8	1.0	1.0	0.9	0.9	0.8	0.7	0.6	2.1	2.6	2.9	3.1	3.3	3.3	3.2	3.1	3.0	3.2	...a	...a	...a
3	0.6	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	q0.8	2.0	2.6	2.7	3.0	3.1	3.3	3.3	...a	...a	...a	2.8	2.5	...a
4	0.6	0.7	0.9	p1.0	1.1	1.1	1.1	1.1	...c	...c	...c	...c	...c	2.0	2.5	2.8	p3.1	3.2	3.2	3.2	3.2	...c	...c	...c	...c	...c
5	...c	...c	0.7	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.0	0.7	0.6	...c	...c	2.8	3.1	3.3	3.3	3.3	3.2	...a	...a	...a	...a	...a
6	0.6	0.8	0.9	0.9	0.9	1.0	1.0	1.0	q1.4	q1.3	q1.1	0.7	0.7	...a	...a	3.0	3.2	3.3	3.3	3.4	3.4	3.3	...c	...c	...a	2.2
7	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	...a	...a	2.9	3.2	3.3	3.3	3.3	3.2	3.2	3.1	2.9	2.5	1.9
8	...e	0.7	0.8	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.8	...e	...a	2.6	2.8	3.2	3.3	3.4	3.3	...a	3.2	3.2	3.0	2.6	2.1
9	...e	0.7	0.8	q1.7	0.9	1.0	1.0	0.9	q1.3	...c	...c	0.7	0.7	2.0	2.6	3.0	q3.2	q3.2	q3.3	q3.3	q3.3	3.3	...c	...c	2.6	2.2
10	...e	0.7	0.7	1.2	1.1	1.1	1.1	1.0	1.2	1.0	1.0	0.7	0.7	2.0	2.6	3.0	3.3	3.4	3.4	3.4	3.5	3.4	3.3	3.1	2.7	2.0
11	...c	...c	1.0	1.0	1.1	1.1	1.1	1.1	1.0	p5.7	1.0	0.7	0.7	...c	...c	3.0	3.3	3.4	3.4	3.5	3.5	q3.2	...b	3.1	2.5	1.9
12	0.6	0.7	p2.5	1.2	1.1	1.1	q1.2	1.1	1.1	1.0	0.7	0.7	0.7	2.2	2.5	...a	3.3	3.3	3.3	q3.6	3.5	3.4	3.2	2.9	2.5	...a
13	0.7	0.7	0.7	1.1	1.0	1.2	1.0	1.0	...c	...c	...c	0.7	0.6	...a	...a	3.2	3.3	3.6	3.5	3.6	3.5	...c	...c	...c	...a	...a
14	...e	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.0	0.8	p0.7	0.7	0.7	2.0	2.4	2.9	3.3	3.4	3.4	3.5	3.5	3.5	3.3	3.0	2.7	...a
15	...c	...c	...c	1.0	1.1	1.0	1.1	1.0	1.0	1.0	0.9	0.7	0.8	...c	...c	...c	3.2	3.4	3.5	3.6	3.6	3.4	3.3	3.0	2.6	...a
16	0.6	0.6	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.6	2.0	2.6	3.0	3.3	...a	...a	...a	3.6	3.5	3.4	3.1	2.7	2.1
17	...e	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	1.9	2.5	2.9	3.1	3.3	3.4	3.5	3.5	3.4	3.2	3.0	2.6	2.1
18	0.5	0.7	0.7	1.0	1.1	1.0	...c	...c	1.0	1.0	1.0	0.7	0.7	...a	2.6	3.1	3.2	3.3	3.4	...c	...c	3.4	3.2	3.0	2.5	...a
19	0.7	0.8	1.1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	2.2	2.5	3.0	q3.2	...c	...c	...c	...c	...c	...c	...c	...c	...c
20	1.0	1.1	1.1	1.1	1.1	1.2	...c	...c	...c	...c	...c	...c	...c	2.2	2.7	3.1	3.3	3.5	3.5	...c	...c	...c	...c	...c	...c	...c
21	...c	...c	...c	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.7	...c	...c	...c	3.3	3.5	3.6	3.5	3.4	3.2	3.1	...a	...a	...a
22	0.7	0.7	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	p0.9	0.7	0.7	2.0	...a	3.1	3.3	3.4	3.5	3.6	3.6	3.6	3.3	q3.2	2.8	2.2
23	0.7	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.1	1.0	1.0	0.7	0.6	2.1	3.1	3.2	3.2	3.3	3.6	3.6	3.5	3.2	3.2	3.1	2.7	...a
24	0.6	0.6	0.7	1.1	1.0	1.1	1.1	1.0	p1.8	1.0	1.0	0.8	0.6	2.0	2.6	2.7	3.0	3.2	3.7	3.6	...a	...b	3.3	3.0	2.5	1.8
25	0.6	0.7	0.9	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	...e	...a	...a	3.2	3.1	3.1	3.1	...a	3.5	3.5	...a	3.0	...a	...a
26	...e	...e	0.6	0.9	1.0	1.0	1.0	1.0	1.0	p1.5	1.0	0.9	0.7	2.1	2.6	2.9	3.3	3.4	3.5	3.6	3.6	3.5	3.4	3.1	2.7	2.1
27	...e	0.7	0.7	0.7	1.1	1.0	0.9	1.0	1.0	p1.0	0.9	0.7	0.6	1.9	2.6	3.0	3.2	3.4	3.5	3.2	3.5	...a	...a	2.8	2.5	2.0
28	0.5	0.7	0.7	0.9	1.1	1.0	1.1	1.1	q1.0	p1.0	0.9	0.7	0.6	1.9	2.3	2.7	2.9	3.0	3.1	2.9	3.0	3.2	p3.1	2.9	2.6	2.0
29	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.8	2.5	2.8	...a	3.0	...a	...a	...a	...a	...a	...a	...a	...a
30	0.7	0.7	0.7	1.0	1.1	1.1	1.0	1.0	p1.0	1.0	1.0	1.0	0.7	1.8	2.4	3.0	3.0	3.0	3.2	3.2	3.2	3.3	3.2	3.0	2.6	1.9
31	...c	...c	...c	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	...c	...c	...c	3.1	3.1	3.1	3.1	3.1	3.2	3.3	3.1	2.7	...a
* MEAN	0.6	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.7	2.0	2.6	3.0	3.2	3.3	3.4	3.4	3.4	3.3	3.2	3.0	2.6	2.0

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 319

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1945 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JANUARY 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.5	4.6	3.2	2.9	2.4	3.2	4.1	4.8	5.5	6.4	6.5	7.0	7.7	8.2	8.9	9.0	8.7	7.3	6.7	6.2	6.3	5.5	5.3	5.8	5.9
2	5.0	...c	...c	3.4	2.9	3.4	4.7	5.2	5.5	7.0	7.6	7.7	8.4	9.5	8.8	7.3	6.6	6.2	6.0	6.0	6.3	6.2	6.0	6.0f	...
3	5.7	5.2	4.4	3.6	2.6	3.0	4.1	4.8	5.8	...c	...c	...c	...c	...c	7.7	6.9	6.4	6.4	6.0	5.5	5.7	5.2	5.6	5.2f	...
4	...f	...f	...a	3.6	3.3	3.1	4.0	4.5	5.7	5.9	5.6	6.0	6.3	6.5	6.5	6.8	6.6	5.9	5.5	4.9	4.7	4.5	4.3	4.5f	...
5	3.9f	2.9f	3.0	2.9	3.0	3.0	4.1	4.8	5.2	6.1	7.0	7.9	9.1	9.2	8.8	8.8	7.9	6.2	5.2	5.1	5.2	5.5	5.4	5.7	5.7
6	5.7	5.1	4.6	...a	3.2	3.1	4.3	5.0	4.9	...a	6.5	7.4	7.8	8.4	8.9	8.3	7.9	6.7	5.3	5.3	6.0	6.0	5.8	5.7	...
7	5.1	4.7	3.7	3.5	3.7	3.9	4.3	4.4	4.9	5.6	6.2	6.6	7.1	8.0	9.0	9.2	8.1	6.9	5.4	4.9	4.7	4.6	4.2	4.1	5.5
8	4.0	3.9	3.8	3.7	3.2	3.3	4.4	5.4	5.7	p5.9	6.4	6.7	7.2	8.0	8.3	p8.7	8.3	6.7	5.9	5.3	4.6	4.4	4.3	4.0	5.5
9	3.8f	3.4f	3.6f	2.9	3.2	3.1	4.0	4.4	5.0	4.8	5.5	5.5	5.8	6.9	7.6	7.1	6.2	6.2	5.5	5.1	4.6	4.4	4.3	4.2	4.9
10	4.3	4.2	3.9	3.5	2.5	3.0	4.0	4.9	5.4	5.3	5.3	5.9	7.2	6.3	5.9	5.3	5.9	5.5	5.2	4.8	6.0	5.4	5.5	5.0	5.0
11	4.8	4.2	3.7	3.2	3.3	3.5	4.0	4.5	5.0	5.4	5.8	6.0	6.6	...a	6.6	6.4	6.1	5.8	5.9	6.2	...a	5.8	5.0	5.0	...
12	4.7	4.2	3.8	...a	...a	...a	4.5	5.3	6.2	6.6	6.5	7.4	7.6	7.7	7.8	8.0	7.5	6.9	6.5	6.5	6.0	5.0	4.3	3.6	...
13	3.6	3.5	3.5	3.5	3.1	2.8	4.4	5.2	5.5	5.9	6.8	8.2	8.9	9.2	9.3	9.2	8.3	7.1	6.7	6.8	6.0	5.9	5.7	5.2	6.0
14	5.0	4.4	4.2	...a	3.0	3.0	4.1	5.0	5.8	6.0	6.6	6.5	6.9	7.5	6.7	6.5	6.4	6.1	5.6	5.3	4.9	4.8	4.4	4.3	...
15	4.1	4.0	3.7	3.2	2.6	2.9	4.5	5.3	6.3	6.1	6.9	7.9	7.8	8.3	8.6	9.2	8.0	7.5	6.0	4.9	5.6	6.0	5.3	5.1	5.8
16	4.8	3.8	3.1	2.6	2.6	2.5	3.3	...g	...g	...g	4.6	5.4	5.6	5.3	4.9	p4.9	4.8	4.5	4.5	4.2	3.7	3.8	3.6	3.6	...
17	3.4	2.4	1.9	1.8	2.0	2.6	4.0	4.8	5.1	5.6	6.6	6.4	6.4	5.9	5.8	5.5	4.7	4.8	4.8	5.3	5.3	5.4	5.3	4.8	4.6
18	4.7	p4.7	...c	...c	...c	...c	...c	4.1	4.5	5.1	5.4	5.6	6.3	7.2	7.5	7.0	6.7	6.0	5.7	5.1	5.3	5.1	5.0	4.9	...
19	4.5	4.5	4.1	2.9	2.6	2.6	3.6	4.0	4.6	4.6	4.7	5.4	5.7	6.0	6.9	6.7	5.8	5.3	5.2	5.2	5.5	5.5	5.4	5.5	4.9
20	5.3	4.6	3.8	3.3	3.0	2.5	3.4	4.0	4.0	...g	4.7	5.4	5.4	5.9	6.1	5.8	5.7	5.3	5.2	5.0	5.0	4.7	4.6	4.6	...
21	4.7	3.9	3.4	3.2	3.0	3.1	4.0	4.3	4.7	5.5	5.8	5.8	6.6	7.4	7.9	7.9	7.1	5.8	5.0	5.0	5.0	4.8	4.4	4.3	5.1
22	4.4	4.1	4.0	3.7	p3.2	3.0	3.8	4.3	5.0	5.2	5.5	5.7	6.5	6.6	6.5	6.6	6.7	6.7	6.2	6.1	5.7	4.8	4.3	4.3	5.1
23	4.5	4.4	3.9	3.3	3.3	3.6	4.3	4.5	5.1	5.5	5.8	6.6	7.0	7.2	p7.4	7.7	7.4	6.6	5.6	5.0	5.5	5.0	4.8	4.6	5.4
24	4.6	4.5	3.8	3.6	2.7	2.8	3.6	4.7	6.0	6.7	5.5	5.6	5.6	6.0	6.8	7.4	7.2	6.7	5.3	4.8	4.6	4.2	4.0	3.9	5.0
25	3.8	3.7	3.4	...a	...a	2.7	4.9	6.0	...a	5.5	6.0	6.9	7.5	7.8	8.3	8.2	7.6	7.0	6.6	6.3	5.9	4.7	4.7	4.4	...
26	4.6	4.0	4.0	3.5	3.5	3.3	3.9	4.0	4.3	4.6	5.5	5.5	5.9	6.2	6.3	5.6	5.9	5.9	5.1	4.7	5.3	5.3	4.9	4.9	4.9
27	4.6	4.1	3.4	3.2	3.0	3.2	4.5	5.0	5.4	5.0	5.4	6.2	6.6	7.4	7.4	7.0	6.0	5.5	4.9	4.8	5.6	5.4	5.1	5.1	5.2
28	5.2	4.1	3.4	3.0	2.7	2.8	4.1	5.0	5.7	6.1	5.8	5.5	5.8	6.4	7.2	7.3	7.0	6.5	5.4	4.8	4.7	4.6	4.3	4.0	5.1
29	3.9	4.0	3.7	3.7	3.1	3.1	4.0	4.6	5.2	5.4	6.5	7.8	7.9	8.3	9.2	5.8	4.5	5.1	5.2	4.3	5.4	5.5	5.5	5.5	5.3
30	5.5	4.5	3.8	3.8	2.4	2.5	3.6	4.1	...g	4.6	4.8	5.2	5.5	5.6	5.5	5.5	5.3	4.8	4.4	4.4	3.5	3.1	3.6	4.0	...
31	4.4	4.1	...a	...a	2.7	2.6	3.5	4.2	4.5	5.3	6.4	6.8	6.4	6.0	6.0	5.5	5.6	5.1	4.6	4.6	5.1	4.7	4.7	4.5	...
MEAN*	4.6	4.1	3.7	3.3	2.9	3.0	4.1	4.7	5.2	5.6	5.9	6.4	6.8	7.2	7.4	7.1	6.7	6.1	5.5	5.2	5.3	5.0	4.8	4.7	5.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 320

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1945 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS JANUARY 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	220	280	260	250	245	...a	330	...a	300	...a	...a	...a	350	315	290	280	270	250	260	245	245	290	270	...
2	240	...c	...c	250	260	245	240	275	350	...a	300	335	355	305	290	300	320	300	280	270	265	280	280	290	...
3	300	300	...a	235	235	260	250	340	350	...c	...c	...c	...c	...c	300	290	...a	290	255	250	...a	...a	...a	270	...
4	270	270	...a	265	300	290	240	375	305	300	420	350	355	325	340	300	300	...a	270	260	270	...a	270	270	...
5	270	260	290	280	...a	275	245	p250	390	...a	...a	...a	330	...a	...a	290	285	270	245	...a	260	300	300	...a	...
6	...a	...a	...a	...a	...a	270	235	300	...a	...a	340	335	335	320	300	300	280	260	270	...a	275	255	295	275	...
7	270	230	240	260	245	240	240	240	275	345	330	345	345	345	295	...a	270	260	...a	...a	265	255	265	275	...
8	270	260	230	240	270	265	240	295	330	p320	340	350	350	330	320	p295	270	265	265	235	250	275	295	300	286
9	...a	275	245	280	315	285	300	210	480	540	355	420	420	340	305	290	305	285	265	230	250	270	310	...a	...
10	...a	255	265	230	230	250	225	545	350	480	500	400	310	365	340	480	345	360	...a	...a	260	280	310	300	...
11	275	245	280	280	260	270	250	360	350	350	355	...a	325	...a	330	335	320	...a	...a	...a	...a	235	300	...a	...
12	270	...a	...a	...a	...a	...a	...a	340	330	305	370	355	340	345	330	310	295	290	290	245	230	255	245	255	...
13	305	310	260	270	230	...a	...a	305	355	270	360	360	320	310	300	285	290	285	270	240	260	265	270	255	...
14	250	240	245	...a	275	290	345	355	320	330	340	360	350	300	310	300	305	270	275	235	240	265	270	285	...
15	295	275	225	220	260	260	240	290	285	330	345	330	355	330	360	300	305	270	265	250	275	250	260	275	285
16	260	275	310	p330	315	310	250	...g	...g	...g	570	435	405	410	p540	p400	435	380	255	260	260	280	300	300	...
17	...a	...a	...a	280	275	275	250	...a	415	435	350	365	360	...a	390	345	445	370	380	270	270	265	265	270	...
18	265	...c	...c	...c	...c	...c	...c	455	480	445	405	390	360	330	315	285	280	285	250	250	250	270	270	250	...
19	285	270	265	230	280	295	255	520	430	495	p550	440	395	380	320	320	300	300	...a	280	265	280	280	270	...
20	230	270	250	260	270	305	265	385	630	...g	490	385	450	395	365	340	360	320	305	265	260	260	280	265	...
21	240	230	270	270	265	250	235	210	430	340	375	395	360	340	320	305	285	275	265	250	250	260	275	300	291
22	260	270	250	240	...a	260	255	400	345	380	370	390	390	360	360	330	...a	285	270	240	240	240	250	280	...
23	260	245	230	260	270	250	255	395	345	365	395	350	330	340	p320	300	270	260	240	230	230	245	270	295	290
24	270	280	230	230	240	220	240	400	300	280	365	410	385	400	340	300	280	270	240	230	230	260	280	290	290
25	290	285	...a	...a	...a	220	230	235	...a	385	370	340	...a	...a	...a	290	280	280	250	230	220	255	260	270	...
26	270	...a	260	270	240	230	220	230	545	495	360	...a	365	335	325	350	300	275	260	240	250	250	270	265	...
27	250	230	260	265	260	265	270	270	320	350	425	350	360	320	305	280	270	290	250	...a	...a	280	285	...a	...
28	260	240	250	270	255	260	270	315	320	305	...a	405	405	370	320	300	300	255	240	220	250	250	270	...a	...
29	275	280	260	245	195	265	240	230	370	540	380	350	355	340	310	330	570	...a	...a	...a	...a	280	...a	260	...
30	245	260	270	270	300	310	290	350	...g	445	435	400	p375	365	380	370	330	240	265	250	245	...a	320	300	...
31	270	...a	...a	...a	275	265	245	240	525	375	330	300	325	325	335	350	300	...a	...a	...a	...a	260	285	265	...
MEAN*	267	261	258	260	263	265	253	326	382	380	390	371	361	345	334	319	316	287	267	247	253	263	280	277	301

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 321

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1945 JANUARY 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	3.9	...e	4.3	...e	...a	...e	4.5	4.4	4.3	4.2	3.9	...
2	...	...	...e	...a	4.3	...a	4.4	4.4	4.5	4.3	4.3	...a	...
3	...	...	4.1	...c	...c	...c	...c	...c	4.3	4.2	...e	3.7	...
4	...	3.8	4.1	4.4	4.6	4.5	4.6	4.5	4.4	4.3	4.2	...	...
5	...	...	4.2	...a	...a	...a	...a	...e	4.3	4.4	4.1	4.0	...
6	...	...	...a	...a	4.4	4.5	...a	4.5	4.5	...a	...a	...a	...
7	...	...	...	4.4	4.4	4.5	4.6	...a	4.4	...e	4.2	3.8	...
8	...	3.9	4.3	q4.4	4.4	4.6	4.5	4.5	...a	p4.3	4.2	4.0	...
9	...	3.7	4.5	4.2	4.[illegible]	4.5	4.6	4.5	4.5	4.3	4.2	4.0	...
10	...	4.2	4.2	4.3	4.5	4.3	4.6	4.5	4.3	4.2	4.0	...a	...
11	...	3.9	3.8	4.3	4.4	...a	4.5	...a	4.6	4.5	4.4	...e	...
12	...	4.0	4.2	4.4	4.6	4.6	4.6	4.7	4.6	4.4	4.3	3.9	...
13	...	...	4.3	q4.3	4.4	4.5	...e	4.6	4.5	4.5	4.2	4.1	...
14	...	3.8	4.2	4.3	4.5	4.6	4.5	4.0	4.2	4.4	4.3	4.0	...
15	...	...	4.0	4.3	4.3	4.6	4.6	4.4	4.4	4.3	4.2	4.0	...
16	...	3.7	3.8	4.0	4.1	4.3	4.4	4.3	4.2	q4.3	4.1	3.9	...
17	...	...	4.2	4.3	4.3	4.4	...a	...e	4.3	4.2	4.2	4.0	...
18	...	3.5	3.8	4.2	4.3	4.5	...a	4.5	4.6	4.3	4.2	4.0	...
19	...	3.6	3.9	4.1	4.2	4.3	4.4	...a	4.4	...a	4.2	3.8	...
20	...	3.6	3.9	4.1	4.2	4.3	4.5	4.4	4.2	4.3	4.2	4.0	...
21	...	...	4.0	4.3	4.4	4.5	4.4	4.5	4.4	...e	4.2	3.9	...
22	...	3.4	4.1	4.3	4.5	4.5	4.4	4.5	4.5	4.4	...a	3.9	...
23	...	3.8	4.0	4.3	4.4	4.4	4.6	4.5	p4.4	4.3	4.2	3.9	...
24	...	3.9	4.0	4.3	4.5	4.6	4.5	4.4	4.4	4.3	4.0	3.8	...
25	...	...	...a	4.2	4.5	4.5	...a	...a	...a	4.5	4.2	4.1	...
26	...	3.4	4.0	4.1	4.3	...a	...a	4.4	4.4	4.4	4.2	3.8	...
27	...	3.7	4.0	4.2	4.4	4.5	4.6	4.4	4.5	4.3	4.2	3.6	...
28	...	3.8	...a	4.3	...a	4.5	4.4	4.5	4.4	4.3	4.2	3.6	...
29	...	...	4.1	4.4	4.3	4.5	...e	4.3	4.2	4.2	4.0	...a	...
30	...	3.3	4.1	4.0	4.3	4.2	4.4	4.4	4.2	4.2	4.1	...	...
31	...	...	4.0	4.2	4.3	4.4	4.6	4.4	4.3	4.2	4.1	...a	...
* MEAN	...	3.7	4.1	4.3	4.4	4.5	4.5	4.4	4.4	4.3	4.2	3.9	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	245	...a	230	...a	...e	...e	215	230	220	220	...a	...
2	...	...	...a	...a	...a	...a	...a	200	230	220	...a	...a	...
3	...	...	240	...c	...c	...c	...c	...c	...a	200	...a	230	...
4	...	240	...a	...e	240	285h	210	200	190	220	200	...	...
5	...	...	...a	...e	...a	...e	...a	...a	...a	215	225	220	...
6	...	...	...a	...a	...e	...a	...a	250	245	...a	...a	...a	...
7	...	...	...	245	235h	280	205	...a	...e	...a	...a	200	...
8	...	230	220	q200	230	245	225	220	...a	...a	230	180	...
9	...	210	220	200	230	220	215	q250	235	220	210	230	...
10	...	225	200	185	235	250	230	240	250	...a	...a	...a	...
11	...	235	195	200	...a	...a	225	...e	205	250h	265h	...a	...
12	...	230	230	200	...a	200	215	250	215	205	215	210	...
13	...	...	200	170	240	295	...a	220	230	220	220	...a	...
14	...	225	225	215	215	200	175	150	235	235	220	225	...
15	...	...	215	220	205	...a	215	190	200	225	225	220	...
16	...	235	220	210	200	195	195	210	220	q195	210	215	...
17	...	...	240	190	200	165	...a	...a	215	220	220	230	...
18	...	235	225	240	220	225	...a	165	...a	180	205	225	...
19	...	235	220	200	205	250	250	...a	...a	...a	220	215	...
20	...	230	200	q210	195	215	205	215	200	240	205	200	...
21	...	...	210	230	220	225	...a	...a	...a	...e	210	215	...
22	...	195	230	245h	270	200	...a	225	...a	240	...e	210	...
23	...	220	215	255h	245	215	250	220	p205	215	220	230	...
24	...	260	...a	220	195	190	210	220	205	220	205	230	...
25	...	...	...a	...a	240	...a	...a	...a	...a	230	200	230	...
26	...	195	...a	385	230	...a	...a	185	220	215	...a	215	...
27	...	220	205	200	200	160	200	200	225	...a	...a	215	...
28	...	230	...e	220	...a	...a	200	200	200	...e	205	215	...
29	...	...	240h	255	230	255	...a	...a	...a	...a	...a	...a	...
30	...	240	225	200	195	195	175	200	200	220	220	...	...
31	...	...	220	210	210	235	225	165	185	220	q240	...a	...
* MEAN	...	228	219	221	221	226	212	210	216	219	216	217	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 322

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1945 JANUARY 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.7	0.7	0.7	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	0.8	q0.8
2	...e	0.7	0.7	1.1	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.1	q1.1
3	0.7	0.7	1.0	...c	...c	...c	...c	...c	1.0	1.1	1.0	0.7	0.7
4	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7
5	0.5	0.7	0.8	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.0	0.7	0.6
6	...e	0.6	0.7	0.7	1.0	0.9	0.9	1.0	1.1	1.1	1.0	0.7	0.6
7	0.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.7
8	...e	0.7	0.7	q0.7	1.0	1.0	0.9	1.0	1.0	p0.9	0.8	0.8	0.7
9	...e	0.5	0.7	0.7	1.0	0.7	1.0	1.0	1.0	0.7	0.7	0.7	0.6
10	0.5	0.7	0.7	1.0	1.0	1.1	1.1	1.1	0.9	0.9	1.0	0.7	0.7
11	0.6	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.7	0.6
12	0.6	0.6	0.7	0.8	1.0	1.1	1.1	1.2	1.1	1.1	1.0	0.7	0.8
13	0.7	0.7	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.0	0.8	0.7	0.7
14	0.7	0.7	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.0
15	0.6	0.7	0.7	1.0	1.1	1.0	1.1	1.1	1.0	1.0	1.0	0.7	0.7
16	0.6	0.7	1.0	1.5	1.5	1.0	1.1	1.0	1.2	1.1	1.0	1.1	0.8
17	0.6	0.7	0.8	1.1	1.1	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.6
18	...c	0.7	1.0	1.1	1.1	1.2	1.1	1.2	1.1	1.1	1.0	0.9	0.7
19	0.7	0.7	1.0	1.0	1.1	1.1	1.0	1.1	1.1	0.9	0.7	0.7	0.5
20	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	0.7	0.6
21	0.6	0.7	0.7	1.1	0.9	1.0	1.1	1.0	1.0	1.1	0.7	0.7	0.6
22	0.6	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.0	1.0	0.7	0.6	0.6
23	...e	0.6	0.8	0.7	0.7	1.0	1.0	1.0	p0.8	0.7	0.7	0.7	0.6
24	0.6	0.7	p0.9	1.0	1.1	1.1	1.1	1.0	0.9	1.0	0.9	0.7	0.7
25	...e	0.6	0.6	0.7	1.0	0.9	1.0	1.0	0.7	0.9	0.7	0.7	0.7
26	0.6	0.7	1.0	1.0	1.0	1.1	1.1	1.0	1.1	p1.0	1.0	0.7	0.6
27	0.6	0.7	0.6	0.7	0.9	1.1	1.0	0.9	0.9	0.7	0.7	0.6	0.5
28	0.6	0.7	0.9	1.0	1.0	0.7	0.7	0.7	1.0	1.0	0.7	0.6	0.5
29	0.6	0.7	0.7	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.7	0.7
30	0.6	0.7	1.0	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.7	0.6
31	...e	0.6	0.7	0.7	1.0	1.1	1.1	1.0	1.0	0.7	0.7	0.6	0.6
* MEAN	0.6	0.7	0.8	1.0	1.1	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2.0	2.5	2.9	2.9	3.2	3.3	...a	...a	2.9	3.1	2.9	...a	...a
2	2.0	2.5	2.9	3.0	3.1	3.1	3.1	3.3	3.2	3.2	3.1	2.7	2.3
3	1.8	2.6	2.9	...c	...c	...c	...c	...c	3.3	3.2	3.0	2.7	2.3
4	1.9	2.5	2.9	3.1	3.3	3.3	3.2	3.2	3.2	3.2	3.1	2.7	2.0
5	1.9	2.5	2.9	3.1	3.2	3.3	3.2	3.3	3.1	3.2	3.0	2.8	2.2
6	1.9	2.6	3.0	3.2	3.3	3.4	3.5	3.5	3.4	3.3	3.1	2.7	2.2
7	1.8	2.5	3.0	3.1	3.2	2.8	3.4	3.2	3.2	...a	...a	2.7	...a
8	2.0	2.6	3.0	q3.2	3.3	3.2	3.5	3.5	3.4	p3.1	3.1	2.7	2.3
9	1.9	2.6	3.2	2.9	3.3	3.4	3.5	3.5	3.4	2.9	3.0	2.7	2.1
10	1.8	2.5	3.2	3.0	3.2	3.4	3.1	3.6	3.4	3.2	3.0	2.6	2.0
11	1.9	2.5	2.7	3.2	3.1	3.2	3.2	3.2	3.3	3.1	3.1	3.0	2.1
12	...a	2.7	3.0	3.0	3.0	3.2	3.7	3.5	3.3	3.2	3.1	2.9	2.0
13	1.9	2.5	3.0	3.2	3.2	3.4	3.4	3.5	3.5	3.3	3.1	2.6	2.2
14	1.9	2.6	3.0	2.9	3.0	3.0	3.1	3.1	3.2	3.0	3.1	2.7	2.3
15	1.8	2.5	2.9	3.2	3.3	...a	...a	q2.9	3.0	3.0	3.0	2.7	2.2
16	2.0	2.6	2.8	3.0	3.1	3.2	3.2	3.2	3.2	q3.1	3.0	2.5	2.2
17	1.7	1.9	2.8	3.0	3.1	3.2	3.1	3.2	3.1	3.2	3.0	2.7	2.1
18	...c	2.4	2.8	3.0	3.2	3.4	3.3	3.2	...a	3.2	3.0	2.5	2.0
19	1.9	2.5	2.8	3.0	3.3	3.4	3.5	3.5	3.4	3.2	2.8	2.8	2.1
20	1.9	2.4	2.8	3.0	3.0	3.2	3.3	3.2	3.2	3.2	2.9	2.7	2.0
21	1.5	2.3	2.8	3.1	3.3	3.4	3.5	3.5	3.3	3.2	3.1	2.2	2.1
22	1.7	2.4	2.7	3.0	3.3	3.5	3.6	3.5	3.5	3.2	3.0	2.8	2.1
23	1.6	2.3	2.8	3.0	3.3	3.5	3.4	3.4	p3.4	...a	3.0	2.6	2.1
24	1.5	2.2	2.8	3.0	3.2	3.4	3.3	3.2	3.2	3.1	3.0	2.4	2.0
25	1.6	2.3	2.7	3.0	3.2	3.4	3.4	3.4	3.4	3.3	2.9	2.5	2.0
26	1.5	2.4	2.9	3.1	3.3	3.2	3.2	3.2	...a	q3.3	...a	2.6	...a
27	1.8	2.3	2.7	2.9	3.1	3.2	3.4	3.2	3.2	...a	3.0	2.6	2.0
28	1.7	2.4	2.8	3.0	3.2	3.2	3.2	3.2	...a	...a	2.9	2.6	1.9
29	1.7	2.3	2.7	3.1	3.2	3.5	3.4	3.2	...a	...a	3.1	2.7	2.1
30	1.6	2.1	2.5	3.0	3.2	3.2	3.4	q3.3	3.3	3.2	2.8	2.8	1.9
31	1.9	2.4	2.7	3.1	3.2	3.2	3.3	3.2	3.2	3.2	3.1	2.6	2.0
* MEAN	1.8	2.4	2.9	3.0	3.2	3.3	3.3	3.3	3.3	3.2	3.0	2.7	2.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 323

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.7	3.6	2.9	2.5	2.4	2.2	3.8	4.3	5.1	5.4	5.8	5.7	6.3	6.6	6.6	6.6	6.2	5.6	5.2	4.7	4.8	4.6	4.5	4.4	4.7
2	4.3	4.0	3.7	3.5	2.9	2.8	4.2	4.8	5.4	5.3	5.5	6.2	7.5	7.4	7.1	6.5	6.6	5.6	6.1	5.6	6.3	5.5	5.6	5.5	5.3
3	5.4	4.9	3.7	3.1	2.7	2.8	3.4	4.3	4.7	5.0	5.7	5.9	5.8	5.8	6.3	6.6	6.3	6.0	5.8	5.3	5.0	4.4	4.0	4.0	4.9
4	3.9	3.9	3.7	3.4	3.4	3.1	3.8	4.8	5.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.0	5.5	5.2	5.0	...
5	4.8	4.5	3.8	3.5	3.5	3.4	4.3	5.5	5.0	5.1	5.3	6.4	7.1	7.4	7.0	7.7	8.4	8.0	6.4	5.6	4.3	3.8	3.6	3.6	5.3
6	3.7	3.8	3.6	3.5	2.9	2.9	3.4	4.2	4.6	...c	...c	...c	...c	7.3	7.5	7.6	7.0	6.4	6.6	7.1	6.5	5.9	5.5	4.6	...
7	4.8	4.3	3.8	3.8	3.6	3.3	4.5	5.4	6.0	6.3	6.5	6.9	6.9	7.1	7.8	8.4	7.8	6.9	5.8	5.7	5.1	4.3	4.2	4.3	5.6
8	4.4	4.2	3.9	3.4	2.8	2.6	4.0	5.2	5.3	5.1	5.5	6.4	5.9	6.4	6.6	6.1	5.7	5.3	5.9	5.7	5.5	5.6	5.2	5.2	5.1
9	4.9	4.6	3.1	2.5	2.4	2.6	3.7	5.0	5.7	6.3	6.3	7.2	8.1	6.7	6.4	6.2	6.8	7.0	6.7	7.1	5.3	4.4	4.0	3.9	5.3
10	3.7	3.8	3.6	2.4	2.2	2.3	3.5	4.6	4.9	4.9	5.5	5.0	5.5	5.9	6.0	6.0	5.8	5.9	5.7	6.0	5.8	5.4	4.8	4.6	4.7
11	4.4	4.1	3.9	3.4	3.2	2.9	3.7	4.5	5.1	5.4	5.7	5.8	6.8	6.2	6.9	7.2	7.0	7.0	6.6	6.0	5.9	4.7	3.5	3.5	5.1
12	3.4	...a	3.4	3.6	3.1	2.5	3.8	4.9	5.6	6.7	5.7h	6.2	6.6	7.3	7.4	7.8	7.9	7.5	8.0	7.0	5.5	4.3	3.6	3.2	...
13	3.1	3.1	3.1	3.3	2.5	2.4	4.1	5.1	5.3	5.5	6.0	6.8	6.5	6.8	7.5	7.6	7.9	7.2	7.2	6.0	5.2	4.0	3.6	3.5	5.1
14	3.3	3.6	3.5	3.4	3.2	3.0	3.9	4.8	5.0	5.5	6.0	6.0	6.9	7.6	8.0	8.2	8.0	7.5	6.8	6.3	5.7	4.6	4.2	3.9	5.4
15	3.8	3.9	3.8	3.1	3.0	2.6	3.7	4.7	5.4	5.5	6.3	6.9	6.7	7.9	9.0	8.3	7.0	6.5	6.2	6.1	5.6	5.8	5.1	5.2	5.5
16	4.3	4.0	3.9	3.4	2.9	3.2	3.5	4.3	4.4	4.5	4.7	5.3	5.8	5.3	5.5	6.0	5.5	5.2	4.8	4.7	4.6	4.3	3.9	3.9	4.5
17	3.8	3.9	3.8	3.5	3.5	2.6	3.3	4.5	4.4	...g	4.5	4.7	5.0	5.4	5.3	5.0	4.8	4.7	4.8	4.4	4.3	3.9	3.6	3.5	...
18	3.8	4.0	4.0	3.5	3.0	3.2	3.8	4.5	4.8	5.0	5.6	6.1	6.9	7.5	7.9	7.7	6.8	6.2	5.7	5.2	4.5	4.2	3.8	3.7	5.1
19	3.6	3.6	3.7	3.7	3.0	2.8	3.6	4.3	4.5	4.6	5.0	5.3	5.8	6.7	6.5	6.1	6.4	6.2	6.3	6.1	5.3	4.6	4.0	3.7	4.8
20	3.5	3.8	3.9	3.9	4.0	3.6	3.8	4.4	5.3	5.9	6.7	6.8	6.8	7.3	7.3	8.0	8.1	7.7	6.8	5.8	5.1	4.4	4.3	4.1	5.5
21	4.0	3.9	3.7	3.9	4.0	3.7	4.0	5.3	5.5	5.8	6.4	7.0	7.5	7.5	7.5	7.8	8.3	8.1	7.7	6.9	5.6	4.3	4.0	3.7	5.7
22	3.5	3.5	3.5	3.4	3.4	3.5	4.3	6.3	5.8	5.9	6.2	p6.6	7.3	7.9	7.4	7.9	8.0	7.9	7.4	7.8	6.3	4.7	4.0	4.0	5.7
23	3.9	3.8	3.5	3.0	3.1	...a	4.0	5.0	5.6	4.8	5.3	5.7	6.6	6.3	6.3	p6.6	...c	7.4	7.2	7.0	5.8	4.0	3.8	3.8	...
24	3.6	3.6	3.5	3.7	3.7	3.2	4.1	5.3	p6.4	6.6	6.7	7.2	p8.2	8.1	7.9	7.8	8.7	8.2	8.3	7.0	6.2	5.4	4.6	4.1	5.9
25	4.0	3.9	p3.6	...c	...c	...c	...c	...c	...c	4.8	4.8	5.3	6.1	5.8	6.2	6.5	6.5	6.0	5.5	5.2	5.2	4.8	4.5	4.6	...
26	4.6	4.4	4.4	4.3	4.3	3.5	4.3	5.2	6.0	6.3	6.1	6.4	7.0	7.6	8.4	p8.5	8.0	p6.6	6.0	6.3	5.9	5.7	5.7	5.4	5.9
27	5.2	4.7	4.2	3.9	3.6	2.6	3.4	4.6	5.3	6.0	6.9	6.7	6.9	7.8	7.5	7.6	6.8	5.6	6.1	5.9	5.6	5.4	5.2	5.2	5.5
28	5.1	5.3	5.3	4.8	3.7f	...f	3.4	4.7	5.3	6.0	5.8	5.5	p6.6	7.0	6.9	7.2	6.6	5.7	5.0	4.7	4.3	4.0	3.6	3.4	...
29																									
30																									
31																									
MEAN*	4.1	4.0	3.7	3.5	3.2	2.9	3.8	4.8	5.2	5.5	5.8	6.2	6.7	6.9	7.1	7.2	7.0	6.6	6.3	6.0	5.4	4.7	4.3	4.2	5.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

FEBRUARY 1945

FEBRUARY 1945

TABLE 324

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...a	...a	250	270	270	255	225	220	350	360	315	355	325	315	310	300	290	300	260	235	245	260	270	280	...
2	255	250	270	260	...a	...a	240	255	300	325	370	355	300	300	310	300	270	310	265	235	230	260	265	280	...
3	270	240	240	260	270	260	250	340	350	400	335	325	...a	380	340	310	305	290	265	230	250	250	260	270	...
4	295	270	260	270	260	225	255	255	345	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...a	...a	275	290	...
5	250	...a	...a	...a	280	...a	...a	250	300	395	395	330	320	300	345	330	300	260	255	230	...a	280	300	...a	...
6	290	280	290	...a	260	270	260	230	360	...c	...c	...c	...c	320	325	300	...a	310	280	240	230	245	220	240	...
7	270	240	245	260	230	250	250	...a	...a	305	300	300	...a	...a	305	280	270	260	250	230	240	260	...a	285	...
8	250	250	255	230	245	250	240	245	300	370	380	335	350	350	315	315	290	310	280	230	265	250	265	275	285
9	270	220	230	260	260	250	240	310	300	295	360	325	295	305	320	340	280	280	270	225	210	240	260	265	275
10	270	265	245	200	255	255	240	280	325	425	320	400	365	330	350	330	310	310	275	230	230	240	240	260	290
11	240	240	220	230	240	230	245	215	295	305	325	365	300	370	320	310	300	270	250	230	235	...a	...a	...a	...
12	...a	...a	...a	220	230	230	230	255	300	295	305h	320	330	310	320	300	290	265	250	220	215	230	245	255	...
13	265	270	260	230	200	230	235	255	360	315	300	275	335	325	310	300	280	260	240	220	210	230	250	255	267
14	...a	260	270	260	260	270	240	260	305	325	320	330	325	300	300	295	280	270	240	230	230	...a	250	285	...
15	265	265	235	270	...a	245	250	290	300	340	330	300	395	340	300	285	290	280	...a	240	270	255	250	240	...
16	220	260	230	...a	...a	...a	...a	350	405	505	...a	400	365	390	380	325	330	290	...a	245	245	240	255	260	...
17	280	290	...a	...a	235	260	280	275	395	...g	p640	505	420	...a	380	390	370	335	275	240	230	225	260	300	...
18	280	...a	...a	245	...a	...a	250	...a	345	405	400	370	350	320	300	285	270	270	240	225	230	250	255	260	...
19	280	275	245	215	240	235	230	...a	430	470	435	455	380	320	305	320	300	280	...a	230	240	...a	235	250	...
20	265	...a	270	270	240	240	230	250	...a	300	...a	...a	...a	300	315	285	265	250	235	220	220	240	250	245	...
21	245	260	260	240	240	...a	220	230	225	300	320	315	300	305	300	300	270	260	235	210	210	230	245	250	...
22	250	255	235	260	270	220	250	235	250	295	300	p330	315	270	320	290	270	260	240	220	200	220	265	255	261
23	260	250	240	...a	...a	...a	...a	240	250	295	365	380	310	300	330	...c	...c	275	245	220	195	230	270	250	...
24	270	240	230	240	230	260	250	250	p265	285	270	320	p265	295	285	300	270	265	235	230	210	230	230	260	258
25	270	260	p230	...c	...c	...c	...c	...c	...c	420	400	420	335	355	340	340	285	275	230	230	245	240	250	280	...
26	255	265	265	240	...a	230	240	255	270	265	305	330	320	305	320	280	260	p265	250	225	250	250	260	270	...
27	250	260	230	265	...a	245	270	240	320	320	300	325	330	235	300	275	265	260	240	230	230	240	260	265	...
28	265	260	230	225	235	270	265	240	330	310	320	335	350	320	320	295	280	245	235	255	295	265	285	270	279
29																									
30																									
31																									
MEAN*	263	258	247	246	248	247	245	259	319	345	350	352	334	320	321	307	288	278	252	230	233	244	257	265	279

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 325

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1945

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.3	4.1	3.8	...
2	...	...	4.1	4.3	4.3	4.5	4.6	4.5	4.4	4.3	4.1	3.8	...
3	...	...	3.8	4.2	4.3	4.4	...a	4.5	4.4	4.3	4.1	3.9	...
4	...	...	4.0	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
5	...	...	...	4.3	4.3	4.4	4.4	...a	4.5	4.3	4.1	3.8	...
6	...	...	4.0	...c	...c	...c	...c	4.5	...a	4.3	...a	4.0	...
7	...	...	...a	4.2	4.4	4.4	...a	...a	4.4	4.3	4.2	3.8	...
8	...	...	4.0	4.3	4.4	4.4	4.5	4.4	4.3	4.3	4.0	3.7	...
9	...	...	4.0	4.3	4.4	4.5	4.5	4.5	4.5	4.2	4.1	3.9	...
10	...	...	4.0	4.3	4.2	4.4	4.3	4.3	4.4	4.3	4.1	3.6	...
11	...	...	4.0	4.3	4.3	4.3	4.4	4.4	4.3	...a	4.2	3.8	...
12	...	...	4.0	4.2	4.4	4.4	4.5	4.5	4.4	4.3	4.2	3.8	...
13	...	...	4.2	4.2	4.4	4.4	4.7	4.5	4.4	4.3	4.2	...	...
14	...	...	4.1	4.3	4.4	...a	4.6	...a	4.5	4.4	4.2	3.8	...
15	...	...	4.0	4.3	4.5	4.5	4.5	4.4	4.4	4.3	4.1	...a	...
16	...	...	4.1	4.1	...a	4.2	4.3	4.4	4.3	4.2	4.0	...a	...
17	...	...	...	4.1	4.2	4.3	4.3	...a	4.3	4.2	4.1	...	...
18	...	...	4.0	4.3	4.4	4.4	4.5	4.4	4.4	4.3	4.1	3.7	...
19	...	...	4.1	4.2	4.3	4.5	4.5	4.5	4.5	4.3	4.1	3.8	...
20	...	...	...a	4.2	...a	...a	...a	4.6	4.6	4.5	4.2	...	...
21	...	...	...	4.4	4.5	4.5	4.6	4.5	4.4	4.5	4.2	3.9	...
22	...	...	4.0	4.4	4.5	p4.6	4.6	4.5	4.6	...a	4.2	3.8	...
23	...	...	3.9	...	4.5	4.6	4.5	4.5	4.5	4.3	...c	3.8	...
24	...	...	...	4.3	4.6	4.4	p4.4	4.5	4.5	4.2	4.2	3.8	...
25	...	...	...c	4.3	4.4	4.4	4.4	4.3	4.3	4.2	4.1	3.7	...
26	...	...	...	4.2	4.4	4.4	4.4	4.5	4.4	4.3	4.2	...	...
27	...	...	...	4.3	4.4	4.5	4.5	...a	...a	...a	4.0	...	...
28	...	...	4.0	4.2	4.3	4.5	4.5	4.4	4.4	4.2	4.0	...	...
29													
30													
31													
* MEAN	...	...	4.0	4.3	4.4	4.4	4.5	4.4	4.4	4.3	4.1	3.8	...

DAY	MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	220	225	...a	...a	205	...a	200	200	...a	...a	...
2	...	...	230	220	205	...a	...a	...a	225	225	205	210	...
3	...	...	220	225	225	...a	...a	230	...a	...a	...a	220	...
4	...	...	210	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
5	...	...	...	200	235	...a	...a	...a	220	230	...a	...a	...
6	...	...	210	...c	...c	...c	...c	...a	...a	220	...a	220	...
7	...	...	...a	...a	...a	...a	...a	...a	...a	220	230	225	...
8	...	...	...a	200	220	...a	...a	...a	...a	225	210	200	...
9	...	...	220	210	200	190	220h	230h	...a	220	225	230	...
10	...	...	230h	220	200	200	200	180	220	200	210	205	...
11	...	...	200	220	195	200	220	220	200	...a	...a	230	...
12	...	...	220	205	205	185	220	220	210	270	...a	...a	...
13	...	...	225	200	205	175	...a	200	195	210	205	...	...
14	...	...	230	220	...a	...a	225	...a	220	...a	235	220	...
15	...	...	225	215	220	200	185	220	210	200	...a	...a	...
16	...	...	270	235	...a	...a	...a	...a	...a	235	...a	...a	...
17	...	...	...	265h	250h	205	205	...a	...a	220	225	...	...
18	...	...	...a	200	190	220	210	220	230	210	230	220	...
19	...	...	205	200	215	200	230	220	255	205	220	215	...
20	...	...	...a	...a	...a	...a	...a	...a	220	260h	215	...	...
21	...	...	...	215	195	215	q215	200	225	235	240	225	...
22	...	...	210	185	220	p215	220	q235	...a	...a	215	220	...
23	...	...	210	...	200	190	225	210	210	...c	...c	220	...
24	...	...	...	200	205	190	p200	205	220	200	200	200	...
25	...	...	...c	205	240	220	215	q210	215	235	225	215	...
26	...	...	...	200	190	200	220	205	...a	...a	235	p220	...
27	...	...	...	210	230	220	...a	...a	...a	...a	215	...	...
28	...	...	225	225	...a	...a	...a	200	...a	...a	230	...	...
29													
30													
31													
* MEAN	...	...	221	213	212	202	213	213	217	222	220	217	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

FEBRUARY 1945 FEBRUARY 1945

TABLE 326

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.6	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.0	0.9	0.7	0.6	0.5
2	0.5	0.6	0.7	0.6	1.1	0.6	0.9	0.9	1.0	0.7	0.6	0.6	0.5
3	0.6	0.7	0.7	1.0	1.1	1.1	1.1	1.1	1.0	1.0	0.8	0.7	...e
4	0.6	0.7	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
5	0.6	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.0	1.0	0.7	0.7	0.5
6	0.6	0.6	0.7	...c	...c	...c	...c	1.1	1.1	1.0	0.7	0.6	...e
7	0.5	0.7	0.7	1.0	0.9	1.0	1.0	1.0	0.9	0.9	0.7	0.7	0.6
8	0.7	0.7	0.7	1.0	1.0	1.1	1.1	1.0	1.0	1.0	0.7	0.7	0.6
9	0.6	0.7	0.7	0.7	0.9	0.9	1.0	1.0	1.0	0.9	0.7	0.6	...e
10	0.7	0.7	0.7	0.9	1.0	1.1	1.1	1.1	1.0	q1.2	1.0	0.7	0.7
11	0.7	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.7	0.6
12	0.6	0.7	1.0	1.0	1.1	1.1	1.0	1.0	1.0	q1.5	0.9	0.7	0.6
13	0.6	0.7	0.9	0.9	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.7	0.7
14	0.6	0.7	0.9	1.0	1.0	1.1	1.0	1.0	1.0	1.0	0.9	0.7	0.6
15	0.6	0.7	0.9	1.0	1.0	1.1	1.1	1.1	1.0	0.9	0.7	0.6	0.6
16	0.6	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.6	0.7
17	0.6	0.7	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.0	0.7	0.6
18	...e	0.6	0.7	0.7	0.9	1.0	1.0	1.0	0.9	1.0	0.7	0.6	0.6
19	0.6	0.7	1.0	1.0	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.7	0.6
20	0.6	0.7	0.7	1.0	1.0	1.1	1.1	1.0	1.1	1.0	1.0	0.7	0.7
21	...e	0.7	0.7	1.0	1.0	1.1	1.1	1.1	1.0	1.0	0.9	0.6	...e
22	...e	0.6	0.6	0.7	0.9	p1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.6
23	...e	0.7	0.7	1.0	1.0	1.0	1.1	1.0	1.0	...c	...c	0.7	0.6
24	0.6	0.7	p0.8	1.0	1.0	1.0	p1.0	1.0	0.9	0.9	0.7	0.7	0.6
25	...c	...c	...c	0.7	0.9	0.9	1.0	1.0	1.0	1.0	0.9	0.7	0.6
26	...e	0.6	0.7	0.9	1.0	1.0	1.0	1.1	1.1	1.1	0.7	p0.5	0.5
27	0.6	0.7	0.7	1.0	1.1	1.1	1.0	1.1	1.1	1.0	1.0	0.7	q0.7
28	q0.7	0.6	0.7	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.0	0.7	...e
29													
30													
31													
MEAN*	0.6	0.7	0.8	1.0	1.0	1.0	1.1	1.0	1.0	1.0	0.9	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.8	2.1	2.7	3.0	...a	...a	3.4	3.3	3.3	3.0	...a	...a	1.9
2	1.7	2.3	2.7	3.1	3.2	3.3	3.2	3.2	3.5	3.5	3.0	2.7	2.1
3	1.7	...a	2.6	3.0	3.2	3.3	3.3	3.3	3.3	3.2	2.9	2.6	2.0
4	...a	2.3	2.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c
5	...a	...a	2.6	3.1	3.3	3.3	3.4	3.3	3.2	3.2	...a	...a	...a
6	1.6	2.3	2.8	...c	...c	...c	...c	3.3	3.2	3.0	...a	2.6	2.0
7	...a	2.3	2.8	3.0	3.2	3.3	3.4	3.4	3.4	3.2	2.9	2.7	2.0
8	1.5	2.2	2.7	3.0	3.2	3.3	3.4	3.4	3.2	3.1	3.0	2.7	2.0
9	1.6	2.0	2.6	3.0	3.1	3.2	3.4	3.4	3.4	3.2	3.0	2.6	1.9
10	...a	2.2	2.7	3.1	3.2	3.3	3.3	3.3	3.2	3.2	2.9	2.5	2.0
11	1.4	2.3	2.7	3.0	3.1	3.2	3.4	3.4	3.3	3.2	3.0	2.6	1.9
12	1.4	2.1	2.7	3.1	3.3	3.5	3.4	3.5	3.3	3.2	2.9	...a	...a
13	1.6	2.3	2.7	3.0	3.2	3.2	3.1	3.2	3.3	3.2	3.0	2.7	2.0
14	1.7	2.3	2.8	3.0	3.2	3.2	3.2	3.0	3.1	3.2	3.0	2.7	2.0
15	1.5	2.2	2.9	3.0	3.2	3.3	3.2	3.4	3.3	3.2	2.9	2.5	...a
16	1.4	2.2	2.6	3.0	3.1	3.2	3.3	3.4	3.3	3.2	2.9	2.6	2.0
17	1.4	2.0	2.7	3.0	3.2	3.3	3.5	3.2	...a	3.2	2.9	2.6	1.8
18	...a	...a	...a	3.0	3.0	3.4	3.4	3.3	3.2	3.1	2.8	2.5	...a
19	...a	...a	3.0	3.1	3.2	3.2	3.4	3.3	3.2	3.0	2.9	2.6	...a
20	1.4	2.2	3.2	...a	...a	...a	...a	3.4	3.4	3.2	2.9	2.5	1.9
21	1.4	2.4	2.7	2.9	3.3	3.4	3.4	3.3	3.3	3.2	3.0	2.5	1.8
22	1.8	2.6	2.8	3.1	3.2	p3.3	3.4	3.4	3.3	3.2	2.9	2.5	1.9
23	...a	2.2	2.7	3.1	3.2	3.2	3.2	3.2	3.3	...c	...c	2.5	2.0
24	...a	2.1	p2.7	3.2	3.3	3.3	p3.2	3.2	3.2	3.2	2.9	2.6	1.8
25	...c	...c	...c	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.0	2.5	1.9
26	...a	2.2	2.6	3.0	3.1	3.2	3.2	3.3	3.3	3.2	3.0	p2.6	2.0
27	1.3	2.0	2.6	3.0	3.2	3.3	3.3	3.3	3.2	3.0	2.9	2.4	1.8
28	1.2	2.0	2.6	2.9	3.1	3.2	3.2	3.2	3.0	2.9	2.7	2.6	1.9
29													
30													
31													
MEAN*	1.5	2.2	2.7	3.0	3.2	3.3	3.3	3.3	3.3	3.2	2.9	2.6	1.9

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 n = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 327

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1945 — MARCH 1945

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.3	3.1	3.1	3.1	3.0	2.4	3.2	4.7	5.1	5.7	6.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
2	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.9	6.5	7.1	6.9	6.6	6.7	7.1	8.0	7.7	6.9	6.0	5.3	4.6	4.1	4.2	...
3	4.4	4.2	4.1	4.0	3.6	3.9	4.1	4.3	4.9	5.4	5.6	6.2	6.8	7.5	8.2	8.0	7.5	6.3	5.8	5.8	5.7	5.4	5.2	5.3	5.5
4	4.9	4.6	4.4	4.2	4.0	3.8	4.4	6.0	6.3	6.8	7.0	6.8	7.1	7.8	8.1	8.1	7.0	6.5	5.8	5.5	5.0	4.5	4.4	4.3	5.7
5	4.1	4.0	p3.8	p3.8	p3.2	p3.0	p3.7	p5.3	p6.2	...c	...c	6.3	p7.1c	7.8	8.3	7.8	7.7	7.1	6.5	p5.8j	5.2	4.3	4.3	4.1	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	5.6	6.3	6.8	7.4	7.5	7.0	6.3	6.3	5.9	5.6	5.5	5.4	5.2	4.9	5.0	...
7	4.9	4.7	p4.7c	4.5	4.5	4.2	4.3	4.7	p5.5c	5.8	6.2	6.0	7.1	7.5	6.9	6.9	6.9	7.1	5.7	6.2	5.0	4.5	4.2	4.1	5.5
8	...c	...c	...c	...c	...c	...c	...c	...c	5.2	5.9	6.6	6.3	6.4	6.4	6.6	7.1	7.3	6.9	...c	...c	...c	5.2	5.2	4.9	...
9	5.2	4.6	p4.4j	3.6	3.3	2.8	3.3	4.9	6.4	p6.6	p6.6c	6.6	7.3	7.7	7.2	6.9	7.1	7.4	7.0	6.4	p5.5	...c	...c	4.5	...
10	4.0	p3.6c	3.6	...c	...c	3.1	p3.9c	5.0	5.2	...c	...c	...c	...c	...c	...c	...c	p6.8	7.0	6.8	6.3	5.8	4.8	4.4	4.3	...
11	4.0	3.6	3.5	...c	...c	...c	...c	...c	...c	6.3	6.4	7.7	9.4	9.9	9.2	7.7	7.0	6.7	6.5	6.9	6.8	6.5	6.0	5.6	...
12	4.9	4.5	4.1	3.8	3.8	3.7	4.8	5.3	6.2	7.2	8.4	9.3	7.0	8.5	p8.2j	8.0	7.9	7.2	7.4	5.8	5.8	4.3	3.6	3.9	6.0
13	3.7	4.0	3.7	3.0	2.8	2.6	2.7	3.7	3.7	p4.1a	4.4	4.9	p4.6b	p4.8b	5.0	5.2	5.2	5.0	4.6	3.6	p3.6a	p2.6a	p2.0	2.8	3.8
14	2.9	2.8	2.5	1.8	1.9	1.9	2.9	4.3	5.0	...c	...c	5.0	5.4	5.4	5.6	5.4	5.6	5.6	5.1	4.9	4.3	3.7	3.0	3.1	...
15	3.1	3.0	3.0	2.8	3.2	2.8	3.3	4.7	6.2	6.2	5.6	6.4	7.8	8.0	7.4	6.0	6.4	5.8	5.6	6.1	5.5	5.4	p4.5f	4.1	5.1
16	p3.8f	3.5	3.7	3.8	4.0	3.2	3.6	4.8	p5.2	5.3	5.6	p6.3c	6.8	7.6	6.8	7.0	6.1	5.7	5.5	5.5	5.2	3.9	3.3	3.0	5.0
17	2.8	...f	...f	p2.8f	2.6	2.7	4.7	5.3	p5.8c	p5.8j	7.1	p7.9j	7.6	p8.0j	7.7	7.3	7.8	7.7	6.8	5.4	4.7	4.0	3.6	3.4	...
18	3.4	3.4	3.7	3.7	3.6	3.0	3.8	5.0	5.4	5.5	6.6	7.0	8.6	9.5	9.7	9.3	8.6	7.1	6.6	5.2	4.3	3.9	3.8	3.9	5.6
19	3.7	3.8	3.7	3.5	...c	...c	...c	...c	...c	5.8	6.1	7.2	7.4	7.8	7.3	7.4	7.4	p6.9j	p6.6c	5.6	4.3	4.0	4.0	3.5	...
20	3.5	3.5	3.4	3.5	3.3	3.4	3.8	5.4	5.7	5.4	6.0	5.9	7.0	6.8	6.5	p6.5	6.9	7.3	7.1	6.2	4.8	4.0	3.7	3.2	5.1
21	p3.3	...c	...c	...c	...c	...c	...c	...c	...c	5.4	5.2	5.3	6.2	6.0	6.8	7.0	7.1	6.5	5.6	4.4	3.9	2.7	2.5	2.4	...
22	2.3	2.4	2.4	p2.7a	2.2	2.1	2.7	4.9	5.2	5.3	5.5	6.1	p7.2c	7.4	...c	...c	...c	...c	6.2	5.1	3.8	3.5	3.4	p3.0f	...
23	3.2	3.1	3.2	3.6	2.9	2.6	3.0	5.0	5.7	6.0	6.3	7.1	7.5	7.5	7.2	p7.1c	7.5	7.2	7.3	5.4	3.6	3.3	3.4	3.5	5.1
24	3.5	3.6	3.4	3.2	3.2	2.8	3.3	5.3	5.7	5.8	5.7	6.4	7.0	7.0	7.2	7.0	7.5	7.2	7.7	5.7	4.8	3.7	3.9	3.8	5.2
25	3.9	3.9	3.6	p4.0	3.6	3.8	4.1	5.7	5.6	6.2	6.8	7.2	7.8	8.2	8.5	7.7	7.9	7.3	6.3	4.5	3.9	3.6	3.6	3.6	5.5
26	3.6	3.6	3.5	3.5	3.5	3.4	3.6	p4.7c	p5.3c	6.0	6.0	p7.0	8.4	8.0	p8.2b	8.6	7.1	7.3	8.0	8.0	6.0	5.5	3.1	3.4	5.6
27	p3.9	4.4	4.6	5.0	4.0	2.9	3.3	5.2	6.0	6.4	7.7	9.0	8.1	8.2	8.2	7.6	6.6	6.9	6.3	5.6	5.3	5.0	5.0	4.9	5.8
28	4.5	4.3	3.5	3.0	...c	...c	...c	...c	...c	6.8	7.9	8.4	9.3	9.8	11.0	10.3	...c	...c	...c	...c	6.8	5.5	p5.4	4.2	...
29	4.5	3.9	2.7	2.4	2.2	2.3	2.5	3.7	4.2	4.2	4.5	4.4	4.6	4.5	4.6	p4.7c	4.9	4.6	4.3	3.5	3.1	2.5	p2.7a	2.8	3.7
30	3.0	3.2	3.3	3.1	3.2	2.8	3.4	5.3	p5.3	5.9	6.5	6.7	7.4	7.5	8.2	7.8	7.3	7.4	6.1	4.3	3.4	3.1	3.1	3.2	5.0
31	3.3	3.3	3.6	3.4	2.9	3.0	3.2	5.2	6.1	7.0	7.3	7.8	8.2	p8.2	8.1	8.0	7.9	7.9	6.7	4.8	4.0	4.0	3.9	3.7	5.5
MEAN*	3.8	3.7	3.6	3.4	3.2	3.0	3.6	4.9	5.5	5.9	6.3	7.0	7.5	7.8	7.5	7.3	7.0	6.8	6.3	5.5	5.0	4.4	4.1	3.9	5.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

MARCH 1945 | MARCH 1945

TABLE 328

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	285	p285a	250	...a	...a	250	235	235	290	340	295	...c	...	...	...	...	...	...	...	...	...	...	...	...c	...
2	...c	...	...	...	...	...	...	...	...c	p280	280	275	310	305	305	310	270	260	240	225	220	220	290	270	...
3	250	265	270	215	260	250	225	220	330	320	340	350	345	320	300	275	260	230	240	230	240	250	270	270	272
4	230	250	225	260	250	240	245	230	225	290	265	290	300	290	270	275	240	230	240	225	240	260	280	250	254
5	280	p295a	p270	220	250	250	250	240	240	...c	...c	315c	p310c	300	275	280	275	230	p245	220	210	255	255	265	...
6	...c	...	...	...	...	...	...	...	...c	300	330	295	310	310	290	300	300	p245a	250	230	260	245	260	260	...
7	270	270	...c	...a	240	260	230	240	p255c	290	290	365	310	290	295	300	290	235	240	230	230	240	245	250	...
8	...c	...c	...	...	...	...	...	...c	250	300	290	315	310	315	325	305	280	265	...c	...c	...c	270	275	285	...
9	245	250	220	225	235	220	245	240	270	p270	p285c	290	290	275	285	290	285	255	230	220	p215	...c	...c	240	...
10	...c	...c	...c	...c	...c	240	p265c	250	220	...c	...	...	...	...	...	...c	p280	230	240	220	220	225	240	240	...
11	235	245	...a	...c	...	...	...	...	...c	310	360	350	330	285	260	270	270	245	260	255	255	270	240	250	...
12	245	...a	...a	...a	...a	...a	...a	215	250	300	300	280	290	305	275	300	260	230	240	205	210	280	280	280	...
13	295	250	260	290	295	300	310	260	...a	...a	560	420	p540b	p500b	455	410	335	...a	...a	...a	...a	...a	...a	295	...
14	300	270	250	270	p265a	270	260	235	...h	...c	...c	480	380	385	360	370	330	270	235	220	235	220	270	270	...
15	270	270	...a	...a	250	240	250	220	255	250	380	440	350	320	300	330	320	255	250	235	225	225	p230f	280	...
16	p290a	300	280	270	240	240	260	255	p300	370	380	p395c	330	335	300	275	260	230	240	250	245	p255c	260	270	285
17	...a	...a	...a	280	245	240	235	220	p245c	255	295	300	310	270	310	300	265	220	225	210	210	230	...a	...a	...
18	270	265	270	...a	...a	...a	220	225	240	290	285	300	230	280	270	265	250	220	220	200	230	245	240	250	...
19	250	245	240	...c	...c	...c	...c	...c	...c	...a	295	300	270	275	295	285	280	p250a	230	200	p240a	280	255	p280a	...
20	280	p265a	240	250	250	p245a	230	230	245	280	270	250	300	300	290	p315	280	255	235	210	200	220	230	255	255
21	p255	...c	...c	...c	...c	...c	...c	...c	...c	300	305	370	305	360	300	290	270	215	230	230	225	250	275	p285a	...
22	265	...a	...a	...a	...a	270	245	230	245	285	310	300	p270c	280	...c	...c	...c	...c	225	200	235	250	280	290	...
23	260	260	240	220	220	240	235	230	230	270	295	285	295	265	280	p285c	270	250	230	200	200	235	250	250	250
24	p240a	250	240	225	230	210	240	230	255	280	300	300	290	280	295	300	270	230	225	210	210	235	245	250	252
25	240	250	250	p240	215	220	230	230	250	260	290	315	300	300	285	280	265	230	215	210	220	260	p255	250	253
26	265	260	...a	...a	250	255	215	230	p240c	280	230	320	285	280	p260b	260	290	255	220	210	210	210	...a	...a	...
27	...a	310	270	230	215	225	255	230	210	255	285	275	280	300	260	260	235	240	220	235	230	255	255	235	...
28	250	245	p250a	265	...c	...c	...c	...c	...c	260	285	280	300	290	275	270	...c	...c	...c	...c	235	250	p200	290	...
29	245	250	225	245	280	290	300	p325a	350	500	435	600	520	600	475	p410c	340	...a	...a	230	250	230	...a	...a	...
30	285	250	240	250	245	220	240	240	p260c	280	...a	...a	310	310	300	290	285	250	250	270	295	320	330	330	...
31	320	300	310	270	300	270	280	250	280	255	265	270	250	270	285	270	250	230	205	205	230	250	240	235	262
MEAN*	265	265	253	248	249	248	248	238	258	295	315	333	318	317	303	299	279	241	234	222	230	248	258	266	268

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d=BEYOND UPPER LIMIT OF RECORDER e=BELOW LOWER LIMIT OF RECORDER f=SPREAD ECHOES PRESENT g= f^0F2 EQUAL TO OR LESS THAN f^0F1 h=STRATIFICATION OBSERVED
j=ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k=IONOSPHERIC STORM IN PROGRESS p=INTERPOLATED VALUE q=DOUBTFUL VALUE

TABLE 329

MARCH 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1945

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.0	4.3	4.4	...c	...	...	...	...	...c	...	...
2	...	...	...c	4.2	p4.4c	4.4	4.6	4.6	4.5	4.3	4.1	3.6	...
3	...	...	4.0	4.2	4.5	4.5	4.5	4.5	4.4	4.3	4.1	...	...
4	...	...	...	4.4	4.5	4.6	p4.6a	4.6	4.5	4.5	...	...	...
5	...	...	...	...c	...c	4.5	p4.5c	4.5	4.5	4.4	4.2	...	...
6	...	...	...	4.3	4.3	4.5	p4.5a	4.4	4.4	4.3	...	...	...
7	...	...	...	4.3	4.4	p4.4c	4.5	4.5	4.5	4.4	4.2	...	...
8	...	...	3.6	4.3	4.4	4.5	p4.5c	4.4	4.5	4.4	4.0	3.5	...
9	...	...	3.9	q4.3	...c	...c	4.5	4.7	4.4	4.4	4.3	3.6	...
10	...	...	...c	...c	...	...	...	...	...	...	q4.0	...	...
11	...	...	...	4.4	4.5	4.4	4.5	4.4	4.4	4.3	4.0	...	...
12	...	...	...	4.1	4.5	4.6	4.5	4.5	4.4	4.4	4.0	...	...
13	...	...	...	...a	...a	4.2	q4.2b	q4.3b	4.2	q4.1a	4.0	...	...
14	...	...	...h	...c	...c	4.3	4.3	4.4	4.3	4.2	4.0	3.4	...
15	...	...	4.0	4.0	4.5	4.3	4.3	4.3	4.4	4.3	4.0	...	...
16	...	...	q3.6	4.4	4.4	p4.5c	4.5	4.5	4.4	4.2	3.9	...	...
17	...	...	...c	3.9	4.2	4.5	4.5	4.5	p4.5a	4.5	4.0	...	...
18	...	...	3.6	4.2	4.3	4.5	4.5	4.5	4.4	4.3	3.9	...	...
19	...	...	...	...a	...a	...a	4.4	4.4	4.4	4.3	4.1	...	...
20	...	...	3.8	4.1	4.3	4.3	4.4	4.5	4.4	q4.2	4.0	...	...
21	...	...	...c	4.0	4.3	4.3	4.4	4.6	4.2	4.3	4.0	...	...
22	...	...	3.4	4.1	4.3	4.3	p4.5c	4.3	...c	...c	...c	...	...
23	...	...	...	4.2	4.3	4.4	4.6	4.1	4.4	p4.5c	4.0	...	...
24	...	...	3.8	4.2	4.3	4.3	4.5	4.5	4.4	4.5	3.9	...	...
25	...	...	3.7	4.2	4.4	4.3	4.6	4.4	4.3	4.3	3.8	...	...
26	...	...	...	4.2	4.3	4.4	4.4	4.5	p4.2b	4.2	3.9	...	...
27	...	...	...	4.0	p4.3a	4.5	4.5	4.6	4.3	4.2	...	...	...
28	...	...	...	4.3	4.6	4.5	4.6	4.6	4.4	4.3	...	...	...
29	...	...	3.5	4.0	4.0	4.1	4.2	4.2	4.1	p4.0c	3.8	...	...
30	...	...	...c	4.1	...a	...a	4.5	4.5	4.4	4.2	4.0	...	...
31	...	...	...	4.0	4.4	4.2	q4.4	q4.5	4.5	4.3	3.6	...	...
MEAN*	...	...	3.8	4.2	4.4	4.4	4.5	4.5	4.4	4.3	4.0	3.5	...

MINIMUM VIRTUAL HEIGHT OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	230	215	...a	...c	...	...	...	...	...c	...	...
2	...	...	...	215	p200c	210	p205a	200	p200a	210	p210a	215	...
3	...	...	215	200	200	225	p210c	200	200	200	225	...	...
4	...	...	...	215	220	200	p210a	220	200	230	...	...	...
5	...	...	...	...c	...c	220	p220c	220	220	220	220	...	...
6	...	...	...	230	225	...a	...a	...a	...a	...a	...	...	...
7	...	...	...	220	210	210	220	240	220	220	230	...	...
8	...	...	220	220	220	205	220	200	225	p210a	225	220	...
9	...	...	240	q240	...c	...c	...c	...c	235	215	230	230	...
10	...	...	...c	...	...	...	...	...	...	...	q210	...	...
11	...	...	...	220	220	225	225	230	215	220	230	...	...
12	...	...	...	200	200	190	230	210	220	230	230	...	...
13	...	...	...	...a	...a	...a	...b	...b	...a	...a	...a	...	...
14	...	...	280	...c	...c	200	q180h	250	230	230	235	230	...
15	...	...	235	210	200	200	q180h	255	230	220	215	...	...
16	...	...	p190	235	220	p210c	200	225	230	225	235	...	...
17	...	...	...	195	200	q200h	220	...a	...a	235	245	...	...
18	...	...	215	210	200	225	...a	...a	...a	235	230	...	...
19	...	...	...c	...a	...a	...a	210	...a	205	240	235	...	...
20	...	...	...a	205	200	185	180	q255h	255	q235	235	...	...
21	...	...	...c	220	220	190	195	225	230	p240h	230	...	...
22	...	...	220	215	200	200	p215c	240	...c	...c	...c	...	...
23	...	...	...	220	205	200	200	190	225	p250c	250	...	...
24	...	...	230	215	200	190	180	q235h	225	230	220	...	...
25	...	...	220	215	200	195	195	q250h	240	240	230	...	...
26	...	...	...	210	225	200	210	q260h	...b	...b	245	...	...
27	...	...	...	220	...a	...a	230	220	225	245	...	...	...
28	...	...	...	230	200	200	215	225	235	230	...	...	...
29	...	...	220	220	200	230	p235a	240	235	p240c	240	...	...
30	...	...	...c	...a	...a	...a	210	225	225	220	210	...	...
31	...	...	...	210	215	200	185	q225	225	215	220	...	...
MEAN*	...	...	226	216	208	205	207	228	220	228	229	224	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 330

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

 MARCH 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.7	0.7	1.0	...c	...	...	...	...	...	...c	...
2	...	...c	...c	0.6	1.0	1.0	0.9	1.0	0.9	0.8	0.8	0.8	...
3	...	q0.5e	0.7	0.8	0.9	1.0	0.9	0.9	0.8	0.9	0.7	0.8	...
4	...	0.7	0.8	0.8	0.9	0.9	0.9	0.9	q0.9	0.8	0.8	0.8	...
5	...	...c	...c	...c	...c	q1.1	p1.0c	0.9	0.9	1.1	0.8	0.7	...
6	...	...c	...c	0.8	1.1	1.2	1.2	1.1	1.2	1.2	1.8	...	...
7	...	0.7	p0.7c	0.8	1.1	1.1	1.1	1.1	1.1	1.0	0.7	0.7	...
8	...	...c	0.7	0.7	1.1	1.1	1.2	1.1	1.0	0.8	0.7	0.7	...
9	...	0.6	0.7	q0.8	1.0	...c	...c	1.0	0.8	1.0	0.9	0.7	...
10	...	...c	...c	...	...	...	...	...	...c	0.8	q0.7	0.7	...
11	...	...c	...c	0.8	1.0	1.0	1.0	1.0	1.1	1.0	0.8	0.6	...
12	...	0.6	0.6	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6	...
13	...	0.6	0.8	0.8	0.9	1.0	...b	...b	1.6	1.1	1.0	0.8	...
14	...	0.6	0.7	...c	...c	1.0	1.1	1.0	1.0	0.9	1.0	0.6	...
15	...	0.8	1.0	1.0	1.1	1.1	1.1	1.0	1.0	1.0	0.8	0.7	...
16	...	0.6	p0.7c	0.7	1.0	p0.9c	1.0	1.0	1.0	0.8	0.7	0.7	...
17	...	...c	...c	0.7	0.6	0.6	0.7	1.1	0.8	0.7	0.7	0.6	...
18	...	q0.5e	0.6	0.6	0.7	1.0	1.0	1.0	0.9	0.8	0.7	q0.5e	...
19	...	...c	...c	1.0	1.1	1.0	1.0	1.0	1.0	1.0	0.8	0.6	...
20	...	0.7	0.6	0.7	1.0	1.0	1.0	1.0	1.0	q1.0	0.8	1.1	...
21	...	...c	...c	0.8	0.7	0.9	1.0	1.0	0.9	0.8	0.6	0.6	...
22	...	0.7	0.8	0.8	1.0	1.0	p0.9c	0.8	...c	...c	...c	...c	...
23	...	0.6	0.7	0.7	1.0	1.0	1.0	1.0	1.0	p0.8c	0.6	0.6	...
24	...	q0.5e	0.8	0.6	0.8	0.8	0.7	0.8	0.8	0.8	0.6	0.6	...
25	...	0.6	0.7	1.0	0.9	0.9	0.9	0.9	0.9	1.0	0.7	0.7	...
26	...	0.6	...c	0.9	1.0	1.1	1.1	1.1	...b	2.1b	1.1	0.9	...
27	...	0.6	0.7	0.7	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.7	...
28	...	...c	...c	0.7	0.7	0.9	0.9	0.9	1.0	0.9	...c	...c	...
29	...	0.6	0.7	0.7	0.7	1.0	1.0	1.0	0.9	p0.9c	0.9	0.7	...
30	...	0.7	p0.8c	0.9	1.0	1.0	0.9	0.9	0.9	0.9	0.7	0.8	...
31	...	0.7	0.8	0.7	0.9	0.9	0.8	q0.9	0.9	0.8	0.7	0.6	...
MEAN*	...	0.6	0.8	0.8	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.2	2.5	3.1	3.2	...c	...	...	...	...	...	...c	...
2	...	...c	...c	3.0	3.2	3.3	3.3	3.4	3.2	3.0	2.7	q2.4	1.8
3	...	2.2	2.5	3.0	3.1	p3.3c	3.3	3.0	...a	...a	2.9	2.6	1.9
4	...	q1.9h	2.6	2.9	3.1	3.4	3.4	3.3	3.0	3.0	...a	...a	1.9
5	...	q2.2	q2.9	...c	...c	3.4	p3.4c	3.4	p3.2c	3.1	2.8	2.6	2.0
6	...	...c	...c	3.0	3.2	3.3	3.3	3.4	3.2	3.0	3.0	...a	...
7	...	...a	...c	...a	...a	...a	...a	3.4	3.3	3.0	2.7	2.3	1.7
8	...	...c	2.5	3.0	3.2	3.3	p3.3c	3.3	3.2	3.0	2.8	2.3	...
9	...	2.0	2.6	q3.0	...c	...c	3.3	...c	3.1	3.0	p2.8a	2.4	...c
10	...	...	2.7	...c	...	...	...	...	...	...c	q2.8	2.5	1.7
11	...	...c	...c	2.9	3.1	3.3	3.3	3.2	3.2	p3.1a	2.8	...a	...a
12	...	...a	...a	2.8	p2.8a	2.8	3.0	p2.8a	2.8	3.0	2.8	2.4	1.6
13	...	2.0	2.4	2.7	3.0	3.2	...b	...b	...a	2.8	p2.9a	2.9	...a
14	...	q1.6h	2.6	...c	...c	3.0	3.1	3.0	3.2	3.0	2.7	2.2	1.5
15	...	2.0	2.5	2.8	q3.1	2.8	2.9	...c	...c	q3.1	2.7	2.3	1.6
16	...	...a	q2.3	2.6	3.0	...c	...a	q3.0	3.1	p3.0a	2.8	2.3	...
17	...	1.8	p2.3c	2.7	...c	...c	...c	...c	...c	3.0	2.7	2.3	1.6
18	...	2.0	2.4	2.9	3.0	3.2	q3.2	3.3	3.2	3.0	2.7	2.2	...
19	...	...c	...c	2.8	2.9	q3.2	q3.2	q3.3	3.2	3.1	2.7	...a	...a
20	...	2.2	...a	...a	...a	3.4	...c	...c	...c	q3.0	2.8	2.5	1.6
21	...	...c	...c	...a	3.0	p3.1c	3.1	3.4	3.2	3.0	2.7	2.3	...
22	...	2.0	2.4	2.8	3.0	3.3	p3.2c	3.1	...c	...c	...c	...c	...a
23	...	2.1	2.5	2.8	3.0	3.0	...a	...a	3.1	p3.0c	2.8	2.2	...
24	...	1.9	2.4	2.6	2.7	...c	...c	3.2	3.2	3.0	2.7	2.2	1.3
25	...	1.7	2.4	2.8	3.0	q3.1	q3.2	q3.2	3.1	2.8	2.7	2.1	1.3
26	...	2.1	p2.5c	2.6	2.8	q2.8	q2.8h	q2.8h	p3.0b	3.0	2.9	...a	...
27	...	2.0	p2.3a	2.5	2.5	...a	...a	q3.2	p3.1a	2.8	2.7	2.1	1.4
28	...	...c	...c	2.7	2.8	3.1	3.1	3.3	3.2	3.0	...c	...c	...c
29	...	1.7	2.4	2.7	3.0	3.1	...a	...a	3.1	p2.9c	2.6	...a	...
30	...	2.1	p2.6c	2.9	3.1	3.2	3.3	3.2	2.9	3.0	2.7	2.2	...
31	...	1.9	2.6	2.9	3.0	q3.2	q3.2	q3.0	3.2	2.9	2.7	2.2	...
MEAN*	...	2.0	2.5	2.8	3.0	3.2	3.2	3.2	3.1	3.0	2.8	2.3	1.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 331

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1945 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND APRIL 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.7	3.6	3.6	3.5	3.1	3.1	3.4	5.5	6.5	7.4	6.9	7.7	p8.4j	9.6	9.4	8.0	8.5	9.8	8.0	7.5	7.4	6.9	p6.5j	4.6	6.4
2	5.0	4.9	5.0	5.1	p3.7a	2.7	2.8	6.2	7.7	7.8	7.6	...c	...c	...c	...c	...c	6.8	6.5	p6.1	p4.1	4.0	3.8	3.5	3.4	...
3	3.2	3.1	3.2	3.0	2.7	2.5	2.8	4.9	p5.7j	6.9	7.4	p8.5j	...c	...c	...c	...c	...c	...c	5.1	4.7	4.2	4.1	4.1	3.8	...
4	3.7	3.5	3.6	3.6	3.0	2.7	2.9	5.1	6.0	6.8	7.4	...c	...c	...c	...c	8.1	...c	...c	...c	...c	3.8	3.8	3.7	p3.6c	...
5	3.7	3.8	4.0	4.5	2.9	2.6	3.0	p5.9j	6.8*	p8.4	9.3	9.3	9.0	p8.1	p8.6j	...c	...c	...c	...c	...c	...c	...c	...c	4.3	...
6	p4.2	...c	...c	...c	...c	...c	...c	...c	6.4	7.5	p8.5j	8.0	8.3	9.1	9.5	p9.0c	8.3	7.2	5.5	4.7	3.7	3.9	p4.2	p4.0	...
7	p3.4	...c	...c	...c	...c	...c	...c	...c	...c	6.7	7.1	8.0	...c	...c	6.9	p6.6j	5.9	5.8	5.1	4.4	3.7	3.5	p3.3a	3.2	...
8	3.4	3.7	3.6	3.7	3.4	3.0	2.8	4.9	5.7	7.4	p8.1j	8.0	9.0	8.3	7.2	7.4	7.3	7.1	6.2	5.5	4.4	4.2	3.6	3.3	5.5
9	3.1	3.2	3.2	3.5	2.7	2.6	2.8	5.0	6.5	7.7	8.8	9.1	9.1	9.2	8.4	p8.0j	p7.2	6.6	5.5	4.0	3.4	3.2	3.2	3.4	5.4
10	3.4	3.4	3.6	3.4	3.4	3.0	3.0	4.9	6.3	6.8	8.0	7.4	8.2	p8.3j	8.0	8.0	7.5	7.0	6.0	4.6	3.7	3.5	3.6	3.5	5.4
11	3.5	3.5	3.8	3.5	2.7	2.7	2.9	5.1	6.5	7.0	7.4	8.0	7.9	7.8	8.3	8.5	7.7	p6.2	4.9	4.8	4.3	4.0	4.1	4.1	5.4
12	4.8	3.5	2.5	3.0	3.0	3.1	3.2	4.4	4.7	5.0	5.0	5.0	5.6	5.5	6.4	6.0	5.4	5.0	4.8	4.0	3.5	4.0	3.8	3.8	4.4
13	3.8	3.7	3.8	3.8	2.9	2.6	2.7	4.2	5.5	5.8	6.7	p6.7c	7.7	6.4	7.8	8.4	7.5	6.4	5.8	4.5	3.9	...c	...c	...c	...
14	...c	3.6	4.0	3.9	3.3	3.1	3.0	4.8	7.2	p6.5j	6.8	6.8	8.2	8.1	8.6	7.5	6.5	6.0	5.7	4.0	3.5	3.4	3.8	4.0	...
15	4.1	p3.5	3.8	3.7	3.6	3.2	3.0	4.6	5.3	...c	...c	...c	8.2	8.5	9.0	8.8	8.5	7.4	5.2	3.7	3.3	3.9	4.0	4.1	...
16	4.0	3.8	4.2	4.2	3.5	2.8	2.6	5.0	6.2	6.1	6.9	7.3	7.0	p7.4c	8.2	8.4	7.2	6.5	5.1	3.3	3.3	3.2	3.2	3.4	5.1
17	3.6	3.8	4.0	4.1	3.7	3.6	3.1	5.1	6.0	6.1	7.3	p7.6c	7.7	7.3	7.7	p7.7c	7.0	6.5	p5.4j	2.9	3.0	3.2	3.1	3.2	5.1
18	3.1	3.3	3.3	3.6	3.2	3.1	3.0	5.0	6.3	7.3	8.0	7.8	7.5	7.8	8.0	7.9	7.6	6.0	4.7	3.1	2.9	3.2	3.2	3.3	5.1
19	p3.2c	p3.2	3.2	3.3	3.4	3.1	3.0	5.0	6.3	6.8	8.0	7.8	7.3	8.1	8.9j	p8.8	p7.6	6.7	5.7	4.3	3.8j	3.8j	3.8j	p4.0	5.4
20	4.0	4.0	4.1	4.2	3.6	3.5j	3.7j	5.5	7.1	7.3	7.2j	...c	7.8	...c	9.4	p8.3	8.1	7.0j	5.6	4.9	4.5	4.5	4.6	4.3	...
21	4.6	4.6	p4.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.9	7.4	6.8	5.8	4.8	3.2	3.3	3.6	3.6	3.6	...
22	3.7	3.6	3.7	...c	...c	...c	...c	...c	...c	7.5	8.9j	8.4j	7.7	7.6j	7.4j	7.4	7.0	p6.6	5.2	3.2	3.1	2.9	3.2	3.3	...
23	3.5	3.5	3.4	3.8	3.5	3.2	3.4	5.5	p7.0c	7.0	p8.3	p8.2	p7.7	p8.4	...c	...c	7.5j	p6.6	4.8	3.7	3.7	3.3	3.5	3.7	...
24	3.8	3.9	3.8	4.0	3.9	3.8	3.5	4.8	...c	...c	...c	...c	p8.9j	p8.8	9.3	9.4	8.0	p7.2j	5.5	3.6	3.5	3.4	3.8	3.9	...
25	3.8	4.0	4.4	4.2	4.3	4.1	4.1	5.4	p7.0	7.0	p7.2	7.9	8.4	...c	...c	...c	...c	6.4	...c	...c	3.5	3.3	3.7	3.8	...
26	3.8	4.3	4.5	5.1	5.3	4.0	3.9	p5.5j	6.9	p7.0	p7.2	7.5	8.0	7.4	...c	...c	...c	...c	5.5	3.9	3.8	p3.6	3.5	3.7	...
27	3.8	4.2	4.2	4.1	3.8	3.1	3.0	p5.3	...c	...c	...c	7.8	7.2	p7.3c	7.8	p8.0	7.4	p6.9	6.4	4.0	3.5	3.5	3.8	3.9	...
28	4.0	4.1	4.0	4.3	4.9	4.0	3.7	5.5	6.9	6.8	p7.6	7.6	p7.6c	p7.7	...c	...c	p7.2	7.5	5.3	4.1	4.1	4.2	3.8	3.7	...
29	3.9	4.2	4.4	4.6	4.8	4.5	4.1	5.7	6.6	7.3	p7.8	...c	...c	p7.8	p7.8	p8.0c	7.2	6.9	p5.5j	4.3	4.3	p4.3	5.0	4.9	...
30	4.5	4.8	5.0	5.1	5.3	4.8	4.2	5.4	6.5	7.9	p9.5	8.7	8.2	8.4	9.6	9.5	8.0	8.0	6.9	4.9	4.4	4.5	4.3	4.2	6.4
31																									
MEAN*	3.8	3.8	3.9	4.0	3.6	3.2	3.2	5.2	6.4	7.0	7.6	7.8	7.9	8.0	8.3	8.0	7.4	6.8	5.6	4.2	3.8	3.8	3.8	3.8	5.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 332

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1945 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED — 120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	235	235	250	230	220	230	230	230	250	245	285	295	295	285	275	p300	300	230	235	250	240	230	210	280	263
2	270	265	...a	...a	...a	...a	...c	...a	250	235	...a	...c	...c	...c	...c	...c	240	230	p225	p230	245	p260a	270	280	...
3	...a	...a	270	260	270	260	245	225	220	275	280	290	...c	...c	...c	...c	...c	...c	225	230	245	250	240	240	...
4	240	260	245	220	205	230	230	225	235	260	275	...c	...c	...c	...c	255	...c	...c	...c	...c	...c	235	245	p260c	...
5	275	275	250	220	195	235	240	240	230	270	265	255	260	280	270	...c	...c	...c	...c	...c	...c	...c	...c	240	...
6	260	250	...a	...c	...c	...c	...c	...c	235	260	260	p275a	290	295	290	p255c	250	235	220	220	225	280	p320	p295a	...
7	p270	...c	...c	...c	...c	...c	...c	...c	250	230	p290c	295	...c	...c	280	270	275	230	220	...a	...a	...a	...a	265	...
8	...a	...a	...a	...a	...a	...a	...a	250	255	280	p290c	300	275	260	290	265	260	240	220	240	240	235	230	250	...
9	...a	...a	260	230	...c	...c	...c	...c	235	270	250	265	260	270	...c	...c	250	230	240	p245a	240	250	280	250	...
10	260	255	230	220	220	220	p225	220	235	270	270	255	230	285	280	260	240	240	215	215	230	p250a	260	260	246
11	260	250	220	210	200	245	230	215	240	255	260	p275	280	290	275	260	240	p220	p230	p220	300	330	300	280	254
12	260	205	200	240	240	250	290	240	350	350	370	450	350	400	320	290	280	p250a	235	230	245	...a	...a	270	...
13	...a	...a	...a	225	230	225	210	250	220	280	310	230	255	310	300	270	250	235	240	280	...a	...c	...c	...c	...
14	...c	300	...a	...a	230	245	235	235	255	250	270	300	280	290	230	260	240	230	230	200	225	...a	...a	240	...
15	p300a	320	290	270	225	260	210	225	220	...c	...c	...c	270	280	260	260	245	230	215	225	260	260	260	280	...
16	300	280	250	220	210	240	240	235	250	255	260	265	270	290	270	255	250	230	210	210	250	225	250	265	249
17	265	270	260	230	230	240	210	220	230	245	265	p270c	275	280	270	p260c	225	220	200	220	270	240	250	260	246
18	300	...a	...a	265	210	260	225	225	245	255	265	270	270	280	260	275	230	220	215	...a	...c	p255	250	p250	...
19	p250c	p245	250	250	220	230	230	230	230	250	265	260	265	285	270	255	240	225	215	230	230	260	260	p250	246
20	250	240	235	225	220	275	240	230	240	245	265	260	285	280	270	p245	255	225	215	225	250	245	240	...a	...
21	...a	...a	...a	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	255	255	245	220	210	230	250	235	240	250	...
22	240	250	p245	...c	...c	...c	...c	...c	...c	260	250	255	260	265	255	260	240	225	200	220	230	240	250	245	...
23	240	240	255	245	220	230	245	220	230	260	255	255	275	p270	p265	260	235	210	220	p230a	240	250	260	255	244
24	255	250	260	250	235	230	205	220	255	260	...c	...c	275	275	290	255	235	220	220	215	260	220	265	240	...
25	255	260	250	250	240	240	225	235	245	245	p275	275	270	270	...c	240	...c	235	...c	...c	220	245	245	...a	...
26	260	290	300	260	225	235	225	230	245	240	260	275	275	275	275	260	...c	...c	220	...a	...a	...a	...a	...a	...
27	270	285	240	230	220	220	260	250	245	...c	...c	265	285	...c	270	250	245	235	220	230	245	240	...a	...a	...
28	260	275	240	245	230	230	220	230	245	225	270	255	...c	285	...c	...c	240	230	200	220	230	225	215	255	...
29	250	250	250	250	235	240	220	230	235	250	265	250	...c	...c	...c	240	235	p230	...a	...a	240	235	245	220	...
30	240	260	270	245	225	220	210	220	240	245	255	p245	250	300	260	265	230	225	200	215	230	215	245	255	240
31																									
MEAN*	261	261	251	239	224	239	230	230	243	260	273	277	276	287	275	261	247	229	219	227	243	246	253	257	250

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 333

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1945 APRIL 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.3	4.6	4.7	4.6	4.7	4.6	4.6	4.0	...	...
2	...	...	...	...a	...a	...c	...c	...c	...c	...c	...c	...	...
3	...	...	...	4.2	4.5	4.7	...c	...c	...c	...c	...c	...	...
4	...	...	...	4.2	4.5	...c	...c	...c	...c	4.2	...c	...	...
5	...	...	...	4.1	4.5	4.6	p4.6h	4.6	4.6	...c	...c	...	...
6	...	...	...	...a	...a	...a	4.5	4.6	4.5	p4.5c	3.8	...	...
7	...	...	...	4.1	p4.6c	4.7	4.3	4.3	4.3	4.2	3.5	...	...
8	...	...	...	4.2	4.6	4.4	4.6	4.6	4.5	...a	...a	...	...
9	...	...	...	4.2	4.5	4.4	4.5	4.5	4.3	4.1	3.7	...	...
10	...	...	...	4.3	4.3	4.5	4.5	p4.6c	4.5	4.2	...	...	...
11	...	...	...	4.2	4.4	4.5	4.5	4.6	4.3	4.2	...	...	...
12	...	...	...	4.0	4.0	4.1	4.2	4.2	4.2	4.0	3.6	...	...
13	...	...	...	4.2	4.4	4.4	4.5	4.5	4.5	4.2	...	...	...
14	...	...	...	4.1	4.3	4.4	4.4	4.3	4.3	3.9	...	...	...
15	...	...	...	...c	...c	...c	4.4	4.4	4.3	4.2	...	...	...
16	...	...	...	4.0	4.3	4.4	4.4	4.2	4.2	4.2	...	...	...
17	...	...	...	3.6	4.3	p4.4c	4.4	4.5	4.3	...c	...	...	...
18	...	...	...	4.1	4.4	4.5	4.5	4.4	4.3	4.1	3.6	...	...
19	...	...	...	4.1	4.3	4.4	4.5	q4.5	4.2	4.1	...	...	...
20	...	...	...	...	q4.4	4.4	4.2	4.4	4.3	...	...	...	...
21	...	...	...	...c	...c	...c	...c	...c	4.2	4.0	...	...	...
22	...	...	...	4.2	4.3	4.5	4.4	4.3	4.3	4.0	...	...	...
23	...	...	...	4.2	4.2	4.4	4.5	4.4	4.4	...	...	...	...
24	...	...	...	4.1	...c	...c	4.4	4.4	4.3	3.9	...	...	...
25	...	...	...	...c	4.5	4.4	4.5	4.5	...c	4.2	...	...	...
26	...	...	...	4.0	4.5	4.6	4.4	4.8	4.7	4.1	...	...	...
27	...	...	...	...c	...c	4.5	4.4	...c	...a	...a	...	...	...
28	...	...	...	...c	4.9	...c	...c	4.6	...c	...c	...	...	...
29	...	...	...	4.2	4.4	4.7	p4.6c	4.6	p4.4c	4.0	...	...	...
30	...	...	...	...	q4.4	4.5	4.5	4.8	4.5	4.2	...	...	...
31													
* MEAN	...	...	...	4.1	4.4	4.5	4.4	4.5	4.4	4.2	3.7	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	230	225	200	q240h	200	220	240	q240	235	...	...
2	...	...	...	...a	...a	...c	...c	...c	...c	...c	...c	...	...
3	...	...	...	220	210	200	...c	...c	...c	...c	...c	...	...
4	...	...	...	225	200	...c	...c	...c	...c	...c	...c	...	...
5	...	...	...	215	200	200	p200h	200	225	...c	...c	...	...
6	...	...	...	...a	...a	...a	220	220	220	p225c	230	...	...
7	...	...	...	225	p210c	200	220	200	230	220	...a	...	...
8	...	...	...	235	230	210	250	...a	...a	...a	...a	...	...
9	...	...	...	220	190	195	...h	210	p220c	210	220	...	...
10	...	...	...	225	210	210	q200	p210c	220	...c	...	...	...
11	...	...	...	220	220	220	200	225	200	210	...	...	...
12	...	...	...	210	210	210	p205a	230	230	230	230	...	...
13	...	...	...	220	240	220	210	210	p215c	225	...	...	...
14	...	...	...	220	215	220	210	p215a	215	220	...	...	...
15	...	...	...	...c	...c	...c	240	225	205	220	...	...	...
16	...	...	...	220	220	215	205	190	260	235	...	...	...
17	...	...	...	220	230	p230c	q235h	210	q220h	...c	...	...	...
18	...	...	...	230	225	210	210	200	200	220	...a	...	...
19	...	...	...	230	235	225	245h	205	230	230	...	...	...
20	...	...	...	...	215	203	p240a	245	230	...	...	...	...
21	...	...	...	...c	...c	...c	...c	...c	225	220	...	...	...
22	...	...	...	240	230	225	210	210	235	205	...	...	...
23	...	...	...	225	225	230	220	220	q225	...	...	...	...
24	...	...	...	220	...c	...c	225	220	215	220	...	...	...
25	...	...	...	...c	230	240	...a	...c	...c	...a	...	...	...
26	...	...	...	235	220	230	220	230	250	...c	...	...	...
27	...	...	...	...c	...c	235	200	...c	...a	...a	...	...	...
28	...	...	...	...c	220	...c	...c	210	...c	...c	...	...	...
29	...	...	...	225	...c	...c	...c	...c	...c	220	...	...	...
30	...	...	...	...	240	205	200	190	250	235	...	...	...
31													
* MEAN	...	...	230	224	218	218	217	213	225	223	229	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 334

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1945 APRIL 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.7	0.7	0.9	1.0	0.9	0.9	1.0	0.9	0.7	0.7	...
2	...	...	0.7	0.8	1.1	...c	...c	...c	...c	...c	0.6	0.6	...
3	...	0.7	0.8	0.9	...c	...c	...c	...c	...c	...c	...c	...c	...
4	...	0.5	0.6	0.8	0.8	...c	...c	...c	...c	...c	...c	...c	...
5	...	0.9	1.0	0.9	1.0	p1.0c	1.0	1.0	0.9	...c	...c	...c	...
6	...	...c	0.7	0.8	0.9	1.0	1.0	1.0	1.0	p0.9c	0.8	0.8	...
7	...	...c	0.9	0.9	0.9	0.9	0.8	1.0	0.9	0.8	0.8	0.6	...
8	...	0.7	0.8	0.8	0.8	0.8	0.9	0.9	1.0	0.9	0.8	0.7	...
9	...	...c	0.6	0.8	1.0	0.8	0.8	0.8	p0.9c	0.8	0.8	...e	...
10	...	0.8	0.8	0.8	0.9	0.9	...c	...c	0.8	0.8	0.8	q0.5e	...
11	...	q0.5e	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	q0.8	...
12	...	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.9	0.8	0.8	...
13	...	0.8	0.8	p0.8c	0.8	0.8	0.8	0.8	0.8	0.6	0.6	q0.5e	...
14	...	q0.5e	0.8	q1.1	0.8	1.0	1.0	1.0	1.0	1.0	0.8	0.7	...
15	...	0.6	0.8	...c	...c	...c	1.0	1.0	0.9	0.8	1.0	0.7	...
16	...	0.6	0.8	0.9	1.0	0.8	1.0	1.0	0.8	0.9	0.7	q0.5e	...
17	...	0.7	0.6	0.7	0.8	p0.7c	0.8	1.0	0.9	p0.8c	0.8	0.7	...
18	...	0.6	0.8	0.8	0.9	0.9	0.9	1.0	...c	...c	...c	...c	...
19	...	0.7	0.7	1.0	1.0	1.1	1.1	1.0	0.9	0.9	0.9	0.9	...
20	...	0.8	0.8	...c	0.9	1.2	1.0	0.8	1.0	q0.9	0.8	...	...
21	...	...c	...c	...c	...c	...c	...c	...c	0.9	0.8	0.8	0.6	...
22	...	...c	...c	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.6	...
23	...	0.5e	0.7	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.7	0.7	...
24	...	0.6	q0.9	0.8	...c	...c	1.0	q0.8	0.8	0.8	0.8	q0.6h	...
25	...	0.7	0.8	0.8	...c	1.1	...c	...c	...c	1.0	...c	...c	...
26	...	0.6	0.8	0.9	0.9	...c	...c	0.8	0.8	0.9	...c	...c	...
27	...	0.6	0.9	1.0	0.9	1.1	...c	...c	1.0	0.9	0.8	...c	...
28	...	0.7	0.8	0.8	0.8	0.8	...c	0.9	...c	...c	0.9	0.7	...
29	...	0.7	0.8	0.8	0.9	...c	...c	0.8	p0.8c	0.8	0.8	0.7	...
30	...	0.8	0.8	0.9	0.8	0.8	0.9	0.7	0.7	...e	...e	...e	...
31													
* MEAN	...	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.1	2.6	2.8	3.0	3.2	3.4	3.4	3.3	3.1	2.7	2.1	...
2	...	...	2.4	2.7	q3.0	...c	...c	...c	...c	...c	2.6	2.2	...
3	...	1.6	2.5	2.8	3.0	3.1	...c	...c	...c	...c	...c	...c	...
4	...	2.1	2.5	2.9	3.0	...c	...c	...c	...c	3.2	...c	...c	...
5	...	2.1	2.3	2.6	...a	...a	2.9	3.3	3.0	...c	...c	...c	...
6	...	...c	2.6	2.9	3.1	3.2	2.7	2.8	2.8	p2.8c	2.7	2.1	...
7	...	...c	2.3	2.9	3.0	3.1	...c	...a	...c	2.9	...a	...a	...
8	...	1.9	2.5	2.7	...a	...a	3.1	3.1	...a	2.9	2.6	2.6	...
9	...	...c	2.5	p2.9a	3.0	3.2	3.2	3.2	3.2	3.0	2.7	...a	...
10	...	1.9	2.4	2.9	3.0	q3.1	3.1	3.0	p3.0a	2.9	2.5	...a	...
11	...	1.5	2.4	2.8	3.0	p3.2a	3.3	3.2	3.1	...a	...a	...a	...
12	...	2.0	p2.6c	2.7	2.9	3.0	3.1	3.2	3.1	3.0	...a	...a	...
13	...	1.7	2.4	2.7	3.1	p3.2c	3.2	3.2	p3.0a	2.8	...a	...a	...
14	...	1.6	2.3	2.7	2.9	3.2	3.2	3.0	3.0	2.9	2.5	1.9	...
15	...	1.9	3.2	...c	...c	...c	3.1	3.3	3.0	2.8	2.6	2.9	...
16	...	2.0	p2.5a	2.7	3.0	3.0	p2.9a	2.8	3.2	2.8	2.5	1.7	...
17	...	2.0	2.5	2.8	3.0	p3.1c	3.0	3.0	3.0	p2.8c	2.5	1.9	...
18	...	2.0	2.4	2.8	3.0	3.1	3.1	3.1	3.0	2.8	...a	...a	...
19	...	q1.8h	2.4	2.7	2.9	3.0	3.1	3.0	2.9	2.8	2.5	2.0	...
20	...	1.8	2.5	2.8	3.0	3.1	3.2	3.0	2.9	...c	q2.4	...a	...
21	...	...c	...c	...c	...c	...c	...c	...c	2.8	2.6	2.6	1.8	...
22	...	...c	...c	2.8	3.0	3.1	3.2	3.2	3.1	2.8	2.5	1.8	...
23	...	1.9	2.4	2.8	3.0	2.8	2.7	3.1	q3.1	2.9	2.6	1.8	...
24	...	1.7	2.3	2.8	...c	...c	3.1	3.1	3.1	...a	2.4	1.5	...
25	...	1.5h	2.5	2.8	3.1	3.2	3.3	...c	...c	q2.9	...c	1.8	...
26	...	1.7	2.6	2.7	3.0	3.4	3.2	...a	3.0	...a	...c	...c	...
27	...	1.7	2.6	2.9	2.9	...c	3.1	...c	3.0	...a	...a	...c	...
28	...	2.0	2.5	2.9	3.0	3.2	...c	3.2	...c	...c	...a	1.7	...
29	...	...a	...c	2.8	3.0	p3.2c	3.0	3.0	p3.1c	3.0	...a	...a	...
30	...	1.8	2.4	3.0	...c	3.2	3.1	3.1	3.1	2.8	2.1	...a	...
31													
* MEAN	...	1.8	2.5	2.8	3.0	3.1	3.1	3.1	3.0	2.9	2.5	2.0	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 335

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1945 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND MAY 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.3	4.6	4.9	5.0	5.5	4.8	4.2	5.2	p6.3	7.0	8.1	9.0	9.6	10.0	10.3	p9.9j	p9.0j	7.7	6.5	4.8	3.6	3.7	3.7	3.9	6.3
2	4.0	4.2	3.9	4.0	4.2	4.1	3.6	5.9	7.1	7.2	7.8	8.7	8.3	8.7	9.5	10.5	9.6	7.3	6.8	p5.5	3.8	3.7	3.7	3.9	6.1
3	4.2	4.0	4.1	4.3	...c	...c	...c	...c	...c	...c	...c	8.0	p8.6	8.7	p9.2j	...c	...c	p6.5	5.5	4.7	3.6	3.4	3.7	3.9	...
4	4.1	3.9	3.8	4.0	3.9	3.2	3.1	5.0	7.1	7.1	8.4	8.3	7.6	8.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	3.4	...
5	3.9	3.9	4.0	4.0	4.0	3.7	3.2	5.1	p6.5	...c	...c	...c	7.4	7.6	8.3	p8.0	p7.6c	7.3	p6.0	4.8	3.8	3.3	3.5	3.8	...
6	4.0	4.2	4.4	4.4	4.4	3.2	3.3	5.0	7.1	7.4	8.8	p7.8j	6.8	p7.3	9.0	p8.8j	6.8	6.5	5.4	4.1	3.8	3.6	3.7	3.7	5.6
7	3.9	3.8	3.5	3.4	3.0	2.6	2.6	4.8	6.0	7.1	p7.8	p8.3j	p7.9j	8.2	7.8	7.4	6.6	5.5	4.6	3.3	3.0	3.1	3.0	2.7	5.0
8	3.0	3.3	3.0	3.0	2.6	2.4	2.4	4.8	6.4	6.6	7.4	8.6	7.7	8.4	8.2	7.8	7.0	5.6	4.7	3.6	3.3	3.2	3.2	3.5	5.0
9	3.6	3.6	3.5	3.6	3.7	3.2	3.0	4.8	6.0	6.3	7.2	7.1	p7.3j	p6.7j	7.4	7.4	6.5	5.8	4.0	2.9	2.7	2.8	2.6	3.0	4.8
10	3.2	3.4	3.4	3.7	4.3	...c	...c	...c	5.7	p6.7j	6.8	8.3	7.2	7.5	7.6	9.5	6.9	6.0	4.7	3.7	3.9	3.7	4.3	5.0	...
11	4.8	4.6	5.0	4.9	5.3	5.1	3.5	4.5	...c	...c	...c	...c	...c	...c	...c	...c	7.0	5.7	4.2	2.5	2.4	p2.7f	p2.7f	2.9	...
12	...f	5.4	4.9	4.2	3.8	3.5	3.8	4.2	5.7	6.5	7.8	7.5	7.1	7.9	p8.8j	7.8	6.0	5.2	3.6	2.8	2.4	2.6	2.7	2.8	...
13	2.8	3.0	3.3	3.5	2.9	2.3	2.5	4.6	5.0	p5.7c	p6.4c	7.0	7.6	...c	...c	...c	...c	6.0	4.3	3.2	3.4	3.8	4.0	4.2	...
14	4.4	p4.5f	4.5	4.2	4.3	4.0	3.6	4.8	...c	...c	5.5	6.4	p5.4	7.2	7.4	6.3	6.5	5.7	3.4	2.9	3.0	3.4	3.3	p3.3j	...
15	3.5	3.5	3.8	3.7	3.5	3.0	2.7	4.0	5.7	6.4	p6.4	6.5	6.3	6.5	6.8	7.0	7.0	4.8	4.0	3.2	2.9	2.7	2.9	2.9	4.6
16	3.0	2.9	3.0	3.1	3.0	2.7	2.2	4.0	5.3	5.8	6.4	6.4	6.6	7.2	7.3	7.7	6.2	5.5	3.6	3.3	2.6	2.4	2.8	3.2	4.4
17	3.4	3.7	3.7	3.4	3.5	2.6	2.4	4.2	5.7	5.8	6.1	6.6	7.4	p9.6j	p8.6j	8.0	7.5	5.6	4.4	3.6	2.4	3.0	3.3	3.5	4.9
18	3.6	4.0	3.8	4.3	4.5	4.0	3.7	4.7	7.0	6.5	6.9	7.0	6.6	6.7	7.0	8.2	6.1	5.8	5.4	4.6	3.9	3.5	4.0	4.4	5.3
19	4.7	4.7	5.1	4.5	4.8	4.2	3.9	4.6	5.7	7.0	7.3	p7.3c	p6.4	6.3	6.7	7.0	6.7	6.8	5.2	3.2	2.7	2.9	3.6	3.5	5.2
20	3.6	3.8	3.5	3.0	2.9	2.4	2.3	4.1	5.6	6.6	7.5	...c	...c	...c	...c	7.8	6.8	6.2	4.9	3.4	2.5	2.9	3.0	3.1	...
21	3.5	3.7	3.5	3.2	3.2	2.9	2.8	4.4	6.0	6.1	6.5	7.4	6.7	7.2	6.9	6.7	6.0	5.7	4.6	4.1	3.3	3.1	3.2	3.2	4.8
22	3.7	3.5	3.7	3.7	4.3	3.5	3.4	4.7	6.5	6.7	6.6	6.5	6.2	7.0	6.6	6.5	5.8	6.0	5.2	4.5	4.2	3.7	3.5	3.7	5.0
23	3.9	4.0	4.1	3.9	4.3	4.3	3.7	4.9	6.0	6.2	7.2	7.0	p6.1	6.5	6.8	p6.8	6.7	6.8	5.6	3.9	2.4	2.7	2.6	2.9	5.0
24	3.1	3.3	3.2	3.3	3.3	3.1	3.1	4.7	5.9	6.4	6.8	7.8	7.1	6.5	7.6	7.8	7.8	6.1	4.7	4.5	3.4	2.8	3.1	3.1	4.9
25	3.4	3.7	3.8	4.1	4.4	4.2	3.5	4.4	5.9	6.4	7.3	7.4	6.6	p6.7	7.9	8.0	6.8	5.9	4.6	3.2	3.1	3.3	4.0	4.3	5.1
26	4.4	4.0	3.7	3.9	4.0	3.7	3.5	4.8	6.0	6.6	7.0	6.6	7.4	7.7	7.5	7.1	6.5	6.3	4.6	3.4	3.8	3.0	3.4	3.5	5.1
27	3.7	4.1	3.9	4.0	3.9	3.7	4.0	4.6	5.8	6.7	7.2	7.5	6.4	7.1	p6.4	6.4	7.1	6.3	5.1	3.3	3.1	3.0	3.0	2.8	5.0
28	3.3	3.8	3.9	4.3	4.4	4.3	3.8	4.9	5.6	6.4	7.6	7.2	7.0	5.8	...c	...c	...c	5.8	4.4	3.7	3.3	2.9	3.1	3.5	...
29	3.4	3.7	3.8	4.0	4.5	4.1	3.3	3.9	5.1	6.2	p6.4	6.9	p7.0	7.2	p6.9	7.1	6.5	6.2	4.7	3.4	3.1	3.3	3.2	3.5	4.9
30	3.5	3.7	3.8	4.1	4.2	4.3	3.7	4.3	5.8	5.9	6.6	7.9	6.7	7.5	6.9	p6.6c	6.2	5.5	4.5	3.2	3.1	3.5	3.7	3.5	4.9
31	3.8	4.4	4.4	4.5	5.0	4.9	3.0	4.8	6.1	5.9	6.2	6.8	7.1	7.0	7.0	7.0	7.6	5.7	4.8	3.3	3.2	3.3	3.6	3.8	5.1
* MEAN	3.7	3.9	3.9	3.9	4.0	3.6	3.2	4.6	6.0	6.5	7.1	7.4	7.1	7.5	7.7	7.7	6.9	6.1	4.8	3.7	3.2	3.2	3.3	3.5	5.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 336

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1945 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS MAY 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	285	p275a	300	260	240	205	200	220	p230	235	280	265	280	290	255	250	230	215	205	205	245	250	240	245	246
2	260	235	240	250	250	220	230	230	230	235	280	250	270	270	280	260	230	225	215	210	225	230	260	250	243
3	245	250	275	255	...c	...c	...c	...c	...c	...c	...c	270	260	260	270	...c	...c	p220	230	220	230	p265	250	p250	...
4	240	245	p265	250	240	235	220	225	230	230	250	250	240	270	...c	...c	...c	...c	...c	...c	...c	...c	...c	260	...
5	250	p250	p230	230	220	p230	220	220	235	...c	...c	...c	...c	...c	280	245	240	220	200	200	210	205	230	235	...
6	250	240	225	220	200	210	240	225	235	225	250	240	250	p255c	260	245	230	220	220	215	220	240	260	p265a	235
7	250	250	225	240	250	250	220	220	225	270	260	240	255	255	245	250	220	220	...a	...a	250	230	235	p260a	...
8	260	240	p220a	235	p240a	240	250	230	230	230	250	270	245	275	255	245	225	215	215	235	...a	...a	255	p265a	...
9	p260	p270	p250	p250	p230	p230	p250	p210	220	245	260	250	255	250	265	250	230	215	200	220	220	220	255	270	267
10	250	270	230	250	230	...c	...c	...c	230	240	285	260	235	280	305	240	230	220	215	205	210	220	250	230	...
11	215	230	220	230	235	190	230h	230	...c	...c	...c	...c	...c	...c	...c	...c	240	220	200	265	275	270	275	280	...
12	240	p240a	235	220	230	245	240	230	240	220	250	255	300	265	260	240	225	210	200	210	225	275	285	260	242
13	250	230	230	220	200	220	220	230	230	270	265	260	280	265	255	250	235	210	200	210	220	220	220	250	235
14	245	230	235	220	220	210	230	230	...c	...c	320	265	250	280	265	245	230	200	200	220	220	240	p250a	270	...
15	250	250	230	210	220	200	250	p240	240	245	p250	255	250	280	265	245	230	215	215	225	210	220	240	260	237
16	250	260	245	255	230	205	210	200	230	245	255	275	270	300	250	250	220	200	205	...a	...a	...a	245	245	...
17	275	285	245	245	220	200	240	220	235	230	270	295	295	270	250	250	225	215	220	220	200	225	220	250	242
18	250	240	220	235	230	205	220	230	230	250	240	240	260	p270	p260	260	225	215	210	210	205	205	240	240	233
19	230	235	230	205	p225	210	220	220	230	p250	p250	p275c	p300	260	285	270	240	220	210	200	210	255	235	245	238
20	260	260	220	255	230	220	250	230	235	275	255	...c	...c	...c	...c	275	235	220	205	220	210	250	280	280	...
21	280	250	220	210	235	220	235	230	245	230	280	275	260	270	275	245	225	225	220	220	210	...a	...a	250	...
22	250	250	p250a	250	245	210	235	230	250	240	260	250	270	280	280	250	240	235	240	240	235	240	p290a	310	251
23	p290a	255	260	260	260	220	240	240	240	250	265	255	235	295	275	p270	250	225	230	200	220	250	...a	...a	...
24	...a	...a	...a	255	250	250	235	225	240	210	275	275	270	280	295	270	240	200	220	210	200	260	260	220	...
25	250	250	235	250	240	220	215	225	235	235	p250	250	270	p285	265	255	230	220	220	230	225	260	260	255	243
26	245	220	225	275	245	260	200	230	230	250	265	255	260	295	300	265	230	230	...a	...a	225	260	250	250	...
27	260	240	230	250	235	235	220	225	230	260	270	300	250	260	255	p240a	240	220	200	225	240	235	250	200	240
28	260	250	290	270	260	230	215	230	230	250	270	265	290	300	...c	...c	...c	220	200	230	p215	225	245	250	...
29	260	270	270	270	225	230	205	215	240	250	260	305	265	260	285	250	240	230	225	p240a	220	255	270	240	249
30	240	240	260	270	250	230	195	230	230	230	290	270	260	275	250	p240c	225	230	220	230	220	240	245	225	241
31	270	260	240	240	240	205	200	235	200	225	245	260	295	280	270	265	240	200	210	235	...a	...a	240	245	...
* MEAN	254	249	242	243	234	222	225	228	232	242	264	263	265	274	269	253	232	218	212	220	222	240	251	252	242

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 337

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF FI REGION													MINIMUM VIRTUAL HEIGHT OF FI REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	q4.5	4.5	4.5	4.8	4.2	3.9	...	...	...	...	...	...	...	220	230	220	220	220	q220	...	...	...
2	...	...	...	...	4.2	4.4	4.3	4.3	3.8	4.1	...	...	...	...	...	...	...	230	225	215	220	220	230	...	...	...
3	...	...	...	...	...c	4.5	4.6	4.4	4.4	...c	...	...	...	...	...	...	...	...c	230	235	220	220	...c	...	...	...
4	...	...	...	...	4.0	4.3	4.4	...c	...c	...c	...	...	...	...	...	...	...	220	210	210	200	...c	...c	...	...	...
5	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
6	...	...	...	...	4.2	4.3	4.2	4.9	4.3	4.0	...	...	...	...	...	...	...	230	220	195	225	q225	225	...	...	...
7	...	...	...	4.0	4.2	4.2	4.4	4.1	4.1	3.6	...	...	...	...	...	...	210	220	p215a	210	220	215	220	...	...	...
8	...	...	...	...	4.2	4.5	4.3	4.2	4.2	3.9	...	...	...	...	...	...	...	220	215	225	200	220	220	...	...	...
9	...	...	...	3.8	4.1	4.2	4.2	4.0	3.6	3.9	...	...	...	...	...	...	220	230	220	195	200	195	220	...	...	...
10	...	...	...	3.3	4.1	q4.3h	4.3	4.3	4.4	3.8	...	...	...	...	...	...	200	220	220h	220	200	235h	250h	...	...	...
11	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...	...	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...
12	...	...	...	...	4.0	4.3	4.3	4.1	4.1	3.8	...	...	...	...	...	...	...	210	220	215	200	210h	240	...	...	...
13	...	...	...	3.8	4.1	4.2	4.2	4.2	4.0	3.8	...	...	...	...	...	...	210	220	230	p230a	220	230	220	...	...	...
14	...	...	...	...	4.5	4.2	4.0	4.1	4.2	3.8	...	...	...	...	...	...	...	200	220	210	p215a	230	210	...	...	...
15	...	...	...	3.8	4.1	4.1	4.3	4.2	4.1	3.8	...	...	...	...	...	...	215	220	210	225	215	215	225	...	...	...
16	...	...	...	...	4.2	4.4	4.4	4.3	4.1	3.7	...	...	...	...	...	...	...	q225h	q225h	230	205	220	220	...	...	...
17	...	...	...	...	4.2	4.4	4.3	3.9	4.2	3.9	...	...	...	...	...	...	...	230	210	210	200	225	220	...	...	...
18	...	...	...	3.7	4.1	4.3	4.3	4.1	4.1	q3.9h	...	...	...	...	...	...	215	205	200	200	q205	q225	...h	...	...	...
19	...	...	...	...	...	...c	4.4	4.1	3.9	3.8	...	...	...	...	...	...	...	...	...c	230	225	200	q210h	...	...	...
20	...	...	...	4.2	4.1	...c	...c	...c	...c	3.8	...	...	...	...	...	...	q250h	230	...c	...c	...c	...c	220	...	...	...
21	...	...	...	...	4.2	4.1	4.3	4.3	4.2	...	...	...	...	...	...	...	...	220	q220h	230	230	230	...	...	...	...
22	...	...	...	...	4.1	4.1	4.3	p4.3a	4.3	3.7	...	...	...	...	...	...	...	215	200	...h	...a	...a	235	...	...	...
23	...	...	...	3.8	4.2	4.3	4.3	4.3	4.2	q3.8	...	...	...	...	...	...	235	240	235	220	220	225	q230	...	...	...
24	...	...	...	...	4.2	4.3	4.5	4.2	4.1	4.0	...	...	...	...	...	...	...	200h	...h	235	210	215	240	...	...	...
25	...	...	...	...	4.2	4.2	4.4	4.3	q3.9	3.6	...	...	...	...	...	...	...	...a	220	q225	230	q200	215	...	...	...
26	...	...	...	...	4.2	p4.3a	4.2	4.3	...a	...	...	...	...	...	...	...	...	240	...a	...a	200	...a	...	...	...	...
27	...	...	...	...	4.1	4.5	4.4	...a	...	...	...	...	...	...	...	...	...	...a	220	225	...a	...	...	...	...	...
28	...	...	...	3.8	4.3	4.2	4.2	4.5	...	...	...	...	...	...	...	...	230	255	235	190	230	...c	...c	...	...	...
29	...	...	...	...	...c	4.4	4.5	4.2	4.2	3.8	...	...	...	...	...	...	...	...c	215	240	245	...c	230	...	...	...
30	...	...	...	...	4.2	4.3	4.5	4.3	4.1	...c	...	...	...	...	...	...	...	235	250	225	225	230	...	...	...	...
31	...	...	...	3.7	4.0	p4.3a	4.6	4.2	4.2	3.8	...	...	...	...	...	...	220	215	p230a	210	p230c	235	215	...	...	...
* MEAN	...	...	...	3.8	4.2	4.3	4.3	4.3	4.1	3.8	...	...	...	...	...	...	220	223	221	218	216	220	224	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 338

MAY 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	q0.6	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.6	...e	...
2	...	0.6	0.6	...e	0.7	0.8	0.9	0.9	0.8	0.8	0.6	0.6	...
3	...	...c	...c	...c	...c	0.9	0.7	0.8	0.9	...c	...c	q0.7	...
4	...	0.8	0.8	1.0	1.0	0.9	0.9	1.0	...c	...c	...c	...c	...
5	...	...e	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...
6	...	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	0.7	0.7	...
7	...	0.6	0.6	0.7	0.7	0.8	1.0	0.9	0.9	0.9	q0.8	0.7	...
8	...	0.6	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.7	0.7	...c	...
9	...	0.7	0.8	1.0	1.0	0.9	1.0	0.9	0.9	0.9	1.0	0.8	...
10	...	...c	0.8	0.7	0.8	1.0	1.1	1.0	0.8	0.8	0.7	0.6	...
11	...	0.6	...c	...c	...c	...c	...c	...c	...c	...c	0.6	0.8	...
12	...	0.7	0.8	0.9	1.0	0.9	1.0	0.9	0.9	0.7	0.7	0.6	...
13	...	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.5	...
14	...	0.6	...c	...c	0.9	1.0	0.9	1.0	0.8	0.8	0.7	0.6	...
15	...	q0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.6	...e	...
16	...	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.6	...
17	...	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.7	0.7	0.6	0.6	...
18	...	...e	0.6	0.7	0.7	0.8	0.7	0.9	0.7	0.7	0.6	0.6	...
19	...	...e	0.6	0.7	0.7	p0.9c	0.9	0.8	0.8	0.7	0.7	0.6	...
20	...	0.6	0.8	0.7	0.9	...c	...c	...c	...c	0.8	0.7	0.9	...
21	...	0.6	0.8	0.7	0.7	0.7	0.6	0.9	0.7	0.7	0.7	0.6	...
22	...	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.9	0.7	0.7	0.6	...
23	...	0.7	q0.8	1.0	1.0	0.9	1.0	1.0	0.7	q0.8	0.7	0.6	...
24	...	0.5	q0.7	0.7	0.9	0.8	0.8	0.7	0.7	0.6	0.7	0.6	...
25	...	0.6	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.6	0.6	...
26	...	...e	0.6	0.7	0.6	0.7	0.9	0.9	0.9	0.8	0.7	0.6	...
27	...	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.7	...
28	...	0.6	0.8	0.9	0.9	0.8	0.9	0.8	...c	...c	...c	0.8	...
29	...	0.6	0.7	0.9	1.0	1.0	1.0	0.9	0.9	0.7	0.7	0.6	...
30	...	...e	0.7	0.7	0.7	0.7	0.6	0.6	0.6	p0.6c	0.6	0.6	...
31	...	...e	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	...
MEAN*	...	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.9	q2.3	2.8	3.1	3.2	3.1	p3.1a	3.1	3.0	2.6	1.7	...
2	...	1.6	2.4	2.8	3.0	3.0	3.1	3.1	3.0	2.8	2.4	1.8	...
3	...	...c	...c	...c	3.0	3.1	3.1	p3.1a	3.0	...c	...c	...a	...
4	...	1.9	2.4	2.9	3.0	3.1	3.1	3.1	...c	...c	...c	...c	...
5	...	q1.1h	2.3	2.7	3.0	3.0	3.1	3.2	3.0	2.9	2.4	...c	...
6	...	1.5	2.3	2.8	3.0	3.0	3.1	3.0	3.0	2.7	2.3	1.5	...
7	...	1.8	2.3	2.7	2.9	3.0	3.0	3.1	2.9	2.7	2.3	...a	...
8	...	2.4	2.2	2.6	2.9	3.0	3.0	3.0	2.9	2.5	2.4	1.5	...
9	...	...c	2.3	2.7	3.0	3.1	3.1	3.1	3.0	2.6	2.2	1.9	...
10	...	...c	...a	2.6	2.8	3.0	3.0	3.0	2.8	2.7	2.3	...a	...
11	...	1.4h	...c	...c	...c	...c	...c	...c	...c	...c	2.1	...a	...
12	...	1.5	2.2	2.6	2.8	2.8	2.7	2.8	2.9	2.5	...a	...a	...
13	...	1.5	2.2	2.5	2.7	2.9	3.0	2.9	2.8	2.5	2.3	1.5	...
14	...	...a	...c	...c	2.8	3.0	3.0	...a	...a	2.9	2.0	...a	...
15	...	q1.4	2.0	2.6	2.7	2.7	3.1	3.0	3.0	2.7	2.4	...a	...
16	...	1.4	2.2	2.5	2.9	3.0	3.0	3.0	2.9	2.7	2.3	...a	...
17	...	q1.2	2.2	2.7	3.0	3.0	3.1	3.1	2.9	2.7	2.2	1.3	...
18	...	1.5	2.2	2.7	2.9	2.9	3.0	3.0	2.9	2.5	2.3	1.4	...
19	...	1.3	2.2	2.6	2.8	...c	...a	2.9	...a	...a	2.2	1.7	...
20	...	1.1	2.2	2.6	2.8	...c	...c	...c	...c	...a	2.3	1.5	...
21	...	1.5	2.2	q2.7	2.9	3.0	3.0	3.0	2.9	2.7	...a	...a	...
22	...	1.1	2.2	2.6	2.8	3.0	3.0	3.0	3.0	3.0	...a	...a	...
23	...	1.1	2.0	2.6	2.7	2.9	p3.0a	3.0	2.9	q2.5	2.2	...a	...
24	...	1.2h	2.3	2.4	2.9	3.0	3.0	3.0	2.9	2.8	2.2	1.7	...
25	...	1.4	2.2	2.6	2.9	3.1	...a	...a	...a	2.6	2.3	...a	...
26	...	1.3	2.3	2.7	2.9	3.0	...a	...a	...a	2.7	2.3	...a	...
27	...	1.3	2.2	2.8	2.9	3.0	3.0	3.1	3.0	2.6	2.4	...a	...
28	...	...a	2.2	2.7	2.9	3.0	3.1	3.0	...c	...c	...c	...a	...
29	...	...a	2.1	2.6	2.9	3.0	3.1	3.0	2.9	2.6	2.2	...a	...
30	...	1.3	2.2	2.6	2.9	3.0	3.0	p3.0a	3.0	p2.5c	2.0	...a	...
31	...	1.0	2.1	2.5	2.9	2.9	3.1	3.0	2.8	2.6	2.1	...a	...
MEAN*	...	1.4	2.2	2.6	2.9	3.0	3.0	3.0	2.9	2.7	2.3	1.6	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 339

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1945 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JUNE 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.0	4.3	4.2	4.4	4.5	3.8	2.8	4.4	5.4h	6.1	6.8	6.6	7.2	6.7	7.0	6.8	6.5	5.6	4.2	2.9	2.5	2.4	2.8	2.8	4.8
2	3.1	3.2	3.6	3.5	3.8	3.6	3.4	4.2	5.7	6.0j	6.3	6.7	5.8	6.1	6.5	6.5	6.2	5.0	4.6	2.7	2.7	2.9	3.2	3.5	4.5
3	3.7	3.5	3.3	3.4	3.5	2.6	2.4	3.8	5.2	6.8	7.0	7.7	6.4	6.1	7.1	7.1	6.9	5.8	3.5	...f	2.5	2.7	3.1	3.4	...
4	3.6	3.2	3.4	3.4	3.1	3.1	2.6	3.9	5.4	6.3	6.7	6.4	6.5	p6.3	5.9	6.9	6.9	5.5	3.4	3.4	2.9	2.9	3.1	2.9	4.5
5	3.0	3.1	3.4	3.5	3.6	3.5	3.4	4.3	5.7	5.9	6.5	6.2	6.0	6.9	6.0	6.4	6.2	5.9	3.7	2.7	2.7	3.1	3.5	3.8	4.5
6	3.6	3.6	3.7	4.0	4.3	4.0	3.9	4.6	5.4	6.4	7.3	6.6	6.5	6.3	7.0	7.4	6.2	5.5	4.3	3.9	4.2	3.8	3.9	4.5	5.0
7	4.0	4.1	4.4	4.6	4.8	4.0	3.8	4.2	6.2	6.2	6.6	7.3	6.6	6.6	7.0	7.3	6.0	5.2	3.8	3.3	3.0	2.6	2.7	3.2	4.9
8	2.7	3.2	3.4	3.5	3.2	2.8	2.9	4.6	5.8	6.4	6.9	6.5	6.6	7.7	7.9	9.1	8.1	6.7	3.5	3.1f	2.6f	2.9f	3.5f	3.0f	4.9
9	3.0f	3.0f	3.5f	3.7f	3.9f	2.6f	2.0f	3.8	6.2	5.9	7.2	7.5	5.9	5.7	7.0	6.4	6.7	6.4	4.1	2.7f	2.5f	2.5f	3.1f	3.1f	4.5
10	3.0f	2.9f	3.2f	3.7f	4.4f	3.0f	...f	3.6	p5.2	5.9	6.4	6.7	7.1	7.3	6.8	7.9	7.1	5.5	4.0	2.3f	2.9	3.1	3.3	3.2	...
11	3.1	3.4	...c	...c	...c	...c	...c	...c	...c	...c	6.3	6.9	7.9	6.5	8.2	6.9	7.4	5.3	3.8f	3.3	2.5	2.9	3.1	3.0	...
12	2.7	3.3	3.4f	3.8	3.3	3.6	3.8	4.5	5.3	5.6	6.6	7.0h	7.8	6.9	6.9	p6.8	7.5	5.9	4.5	3.1	3.2	3.2	3.4	3.5	4.8
13	3.7	4.0	4.2	4.2	4.3	4.0	...c	...c	...c	5.9	6.8	6.6	6.5	7.4	p6.1	8.3	6.7	6.0	4.1	3.1	2.7	3.1	3.1	3.2	...
14	3.5	3.5	3.6	3.7	3.3	3.3	3.0	4.0	5.6	p6.0	6.8	6.7	6.9	7.1	7.0h	8.2	p6.6	5.5	3.8	...c	...c	...c	...c	3.2	...
15	3.3	3.5	3.3	3.2	3.4	3.2	2.8	4.2	5.5	6.7	6.8	p6.7	p7.0	6.3	7.5	7.5	7.5	6.0	5.1	2.3	2.8	2.5	2.5	2.7	4.7
16	2.6	2.7	2.9f	3.1	2.9	2.7	2.4	3.9	5.9	5.8	p6.8	7.2	p5.7	p7.9	7.8	7.1	6.9	6.1	3.5	2.8	3.0	2.7	2.9	2.7	4.5
17	3.3	3.9	4.4	4.4	4.3	4.5	4.1	4.3	5.4	7.0	6.8	6.6	p6.9	7.2	7.3	6.9	7.8	6.1	4.4	3.0	3.7	3.2	3.5	3.7	5.1
18	4.0	4.2	4.5	4.7	4.4	3.6	3.7	p4.6	6.4	7.4	7.5	p6.7	6.8	6.8	7.0	7.5	6.5h	5.5	4.7	3.0	3.2	3.2	3.3	3.2	5.1
19	3.5	3.5	3.6	3.5	3.6	2.9	2.7	3.9	6.1	p6.8	p7.3	6.9	6.4	6.6	6.8	7.5	6.1	5.9	4.8	2.5	2.2	2.4	2.8	2.9	4.6
20	2.9	2.8	3.0	3.3	3.5	2.7	2.5	4.1	p5.3	5.5	6.3	7.3	6.7	p7.5	p7.5	7.3	...c	...c	...c	...c	...c	3.1	3.0	p3.3	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.3	p7.4	p7.0	6.0	p7.5	7.5	6.6	p7.0	p5.2	3.5	2.4f	2.9	3.0	3.2	3.1	...
22	3.2	3.1	3.3	3.2	3.5f	3.6	2.4	3.9	p4.5	6.1	6.3	6.8	7.8	6.9	7.3	6.9	7.7	5.3	3.9	2.3f	2.7	...c	...c	...c	...
23	...c	3.4	...c	...c	...c	...c	...c	3.9	5.0	5.9	6.1	6.3	6.6	7.2	6.5	7.3	6.3	6.0	3.4	3.2	3.2	3.6	3.9	3.9	...
24	3.8	4.0	4.2	4.3	4.2	3.6	...c	...c	...c	5.4	6.4	8.2	6.4	6.8	6.5	6.6	6.4	5.6	2.9f	p2.7a	2.3	2.7	2.8	2.9	...
25	2.7	3.0	3.1	2.6	2.4	2.2	2.0	3.2	4.9	6.1	5.7	6.7	5.5	6.2	6.6	6.8h	5.7	5.6	3.2	3.1	2.5	2.2	2.4	2.5	4.0
26	2.4	2.5	2.7	3.1	3.1	3.0	2.1	3.5	4.8	6.1	6.1	7.2	5.4	6.8	6.8	6.3h	5.9	5.6	3.8	3.0	2.7	2.9	2.8	3.0	4.2
27	2.9f	2.9f	2.8f	2.1f	2.1f	3.2	3.5	3.7	5.2	5.6	6.3	5.7	5.8	5.8	6.9	6.7	7.4	5.4	4.5	2.9	3.0	3.7	4.3	4.5	4.4
28	4.0	3.8	3.9	4.2	3.6	3.7	3.2	4.2	5.1	p5.1	p5.5	6.4	6.2	6.2	6.2	6.6	5.7	5.6	4.6	3.6	2.7	2.7	2.8	2.9	4.5
29	3.5	3.5	3.5	3.9	3.8	3.2	2.4	3.6	4.9	5.4	5.2	6.0	7.5	6.4	5.4	p6.8c	7.0	6.0	4.0	2.8	2.6	3.1	2.9	3.0	4.4
30	3.4	3.5	3.8	3.7	4.0	3.8	2.8	3.6	4.5	...c	...c	6.2	6.6	6.8	5.9	6.8	6.6	5.9	4.2	2.7	2.4	2.4	3.4	3.1	...
31																									
MEAN*	3.3	3.4	3.6	3.7	3.7	3.3	2.9	4.0	5.4	6.1	6.6	6.8	6.6	6.8	6.9	7.1	6.7	5.7	4.0	2.9	2.8	2.9	3.2	3.2	4.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

JUNE 1945 JUNE 1945

TABLE 340

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	250	240	240	225	200	220	225	230	240	255	300	375	250	265	260	235	210	p215a	215	235	230	265	260	246
2	255	245	245	245	240	230	215	215	230	240	230	260	265	290	260	235	230	210	230	200	230	260	250	280	241
3	265	240	240	240	230	210	225	235	240	250	260	245	275	260	290	270	230	215	220	220	...a	...a	...a	280	...
4	245	245	245	230	235	245	225	230	235	230	250	250	270	p335	245	280	240	215	215	240	235	235	245	235	244
5	250	250	245	240	230	240	235	225	220	250	275	290	235	235	270	270	240	215	220	230	250	230	240	230	242
6	235	220	245	235	230	210	220	225	220	255	260	270	280	260	275	245	250	225	210	255	215	240	270	235	241
7	220	265	245	250	235	p220a	205	235	240	240	270	260	265	280	270	250	225	220	225	245	220	240	245	235	242
8	220	260	230	230	235	p230a	230	240	230	255	260	265	270	230	290	260	230	210	235	225	200	250	220	260	242
9	230	280	265	245	215	200	225	230	240	240	270	250	260	245	270	265	240	220	210	220	205	300	260	250	243
10	260	260	270	285	...a	...a	...a	230	p230	250	280	275	260	280	260	260	230	225	210	...a	...a	245	250	235	...
11	245	240	...c	...c	...c	...c	...c	...c	...c	...c	250	230	265	260	270	250	240	...a	...a	...a	...a	...a	...a	...a	...
12	...a	260	290	245	245	p240a	235	225	215	230	265	270	265	270	250	p265	245	225	p215a	215	240	235	p230a	215	...
13	245	250	260	245	235	225	...c	...c	...c	230	250	235	255	270	p240	250	240	220	215	225	260	225	250	265	...
14	260	250	260	280	270	235	225	225	230	p245	270	245	260	275	240	250	240	...a	...a	...c	...c	...c	...c	...a	...
15	...a	...a	255	245	235	230	230	225	225	250	250	265	p275	275	280	255	235	215	220	190	260	240	255	250	...
16	265	265	270	250	235	235	215	245	230	240	p260	235	p260	p270	265	250	235	220	210	250	230	245	240	255	245
17	240	280f	245	235	230	205	205	235	235	255	265	280	p280c	290	260	265	245	215	200	p230a	210	260	255	260	245
18	255	250	240	p235a	220	260	220	p230	230	250	250	p285	270	280	260	240	235	220	205	245	230	...a	...a	250	...
19	265	260	245	250	220	225	220	225	240	p250	p250	270	270	285	290	260	230	215	210	215	p265a	290	270	265	249
20	250	245	260	230	225	210	235	235	p225	230	305	270	260	p280	p280	285	250	...c	...c	...c	...c	240	240	...a	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	250	255	p265	275	p280	260	230	p235	p215	210	280	230	245	240	245	...
22	260	240	270	270	245	215	230	220	p220	240	260	255	275	255	245	250	230	220	230	...a	...a	...c	...c	...c	...
23	...c	270	...c	...c	...c	...c	...c	225	230	235	265	270	295	260	265	270	240	225	...a	...a	...a	240	270	250	...
24	250	240	250	245	235	225	...c	...c	...c	240	265	255	290	265	285	250	240	215	...a	...a	...a	...a	270	275	...
25	300	255	240	230	220	230	290	240	220	255	260	265	270	245	265	250	235	225	...a	...a	225	245	240	260	...
26	230	255	230	270	245	210	p245a	240	240	265	280	275	280	290	240	270	230	220	p215a	245	220	230	p270a	300	250
27	280	255	225	235	235	235	210	215	240	235	240	250	325	280	275	270	240	220	225	220	...a	...a	260	235	...
28	220	240	240	225	235	235	p230a	230	220	p240	p250	270	270	p270a	275	265	240	...a	...a	...a	...a	...a	...a	240	...
29	235	270	240	240	225	210	220	215	225	255	235	250	250	270	285	p280a	250	215	215	...a	270	...a	220	245	...
30	255	240	p240	235	230	205	...a	...a	220	...c	...c	245	265	245	265	280	230	235	...a	...a	...a	...a	...a	265	...
31																									
MEAN*	250	253	249	245	233	224	227	229	229	244	260	263	274	271	266	259	237	219	216	230	233	246	250	253	244

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d ≦ BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

JUNE 1945 — TABLE 341 — JUNE 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	4.1	4.6	4.8	4.2	4.0	...	...	...	...
2	...	...	...	3.9	4.0	4.3	4.2	4.1	4.2	3.8	...	...	...
3	...	...	...	3.9	4.1	4.1	4.5	4.0	3.9	...	...	...	...
4	...	...	...	...	4.1	4.2	4.2	4.7	4.0	4.1	...	...	...
5	...	...	...	...	4.2	4.3	4.2	4.2	4.2	...	...	...	...
6	...	...	...	...	4.0	4.3	4.3	4.2	4.1	3.8	...	...	...
7	...	...	...	...	4.0	4.2	4.2	4.3	4.1	3.7	...	...	...
8	...	...	...	...	4.0	4.0	4.1	4.1	4.2	3.8	...	...	...
9	...	...	...	...	4.0	4.1	4.3	4.2	4.2	...	...	...	...
10	...	...	...	...	4.1	4.3	4.1	4.4	4.0	3.8	...	...	...
11	...	...	...	...	4.0	4.3	4.3	4.3	3.9	...	...	...	...
12	...	...	...	...	4.2	4.3	4.5	4.4	4.1	...	...	...	...
13	...	...	...	...	...	4.2	...	4.3	4.1	...	...	...	...
14	...	...	...	...	4.3	4.3	4.3	4.2	4.0	3.8	...	...	...
15	...	...	...	...	4.2	4.4	4.3	4.3	...	...	...	...	...
16	...	...	...	...	4.5	4.2	4.2	4.5	4.2	4.0	...	...	...
17	...	...	...	...	4.1	...	4.4	4.3	...	...	...	...	...
18	...	...	...	3.9	4.2	4.3	4.4	4.2	...	4.0	...	...	...
19	...	...	...	...	4.2	4.4	4.4	4.5	4.3	4.0	...	...	...
20	...	...	...	...	4.6	4.4	4.4	q4.3	q4.0	4.3	...	...	...
21	...	...	...	...	4.0	4.3	4.3	4.3	4.1	3.8	...	...	...
22	...	...	...	...	...	4.3	4.3	4.2	4.3	...	...	...	...
23	...	...	...	...	4.3	4.3	4.3	4.4	4.2	3.9	...	...	...
24	...	...	...	...	4.0	4.2	4.4	4.2	4.2	3.9	...	...	...
25	...	...	...	...	4.1	4.3	...	4.2	...a	...a	...	...	...
26	...	...	...	...	4.1	4.2	4.4	4.3	4.1	...	...	...	...
27	...	...	...	...	4.0	4.2	4.3	...	4.1	4.0	...	...	...
28	...	...	...	...	q4.0	4.1	4.2	...a	...a	3.5	...	...	...
29	...	...	...	...	...	...	4.2	4.1	4.0	...	...	...	...
30	...	...	...	...	...c	4.2	4.2	4.2	4.0	4.0	...	...	...
31													
* MEAN	...	...	...	3.9	4.1	4.3	4.3	4.3	4.1	3.9	...	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	255	220	185	...a	...a	...	...	...	...
2	...	...	...	230	235h	245h	195	210	225h	220	...	...	...
3	...	...	...	245	245	215	205	220	...a	...	...	...	...
4	...	...	...	...	270	205	210	220	215	245	...	...	...
5	...	...	...	...	250h	215	220	p225a	200	...	...	...	...
6	...	...	...	...	245	220	200	240h	220	235	...	...	...
7	...	...	...	...	230	230	220	235	225	220	...	...	...
8	...	...	...	...	230	205	210	220	235	240	...	...	...
9	...	...	...	...	235	260	220	210	230	...	...	...	...
10	...	...	...	...	240	230	210	230h	220	230	...	...	...
11	...	...	...	...	215	215	270h	220	210	...	...	...	...
12	...	...	...	...	225	200	255h	235	200	...	...	...	...
13	...	...	...	...	...	230h	...	230h	220	...	...	...	...
14	...	...	...	...	230	225	215	200	210	245	...	...	...
15	...	...	...	...	230	215	200	205	...	...	...	...	...
16	...	...	...	...	230	225	210	220h	235	210	...	...	...
17	...	...	...	...	225	...	225	210	...	...	...	...	...
18	...	...	...	235	250	195	215	200	...	230	...	...	...
19	...	...	...	...	250	230	215	225	230	225	...	...	...
20	...	...	...	...	230	230	225	q215	q235	240	...	...	...
21	...	...	...	...	235	230	215	220	225	210	...	...	...
22	...	...	...	...	...	230	220	230	235	...	...	...	...
23	...	...	...	...	230	200	220	255h	215	185	...	...	...
24	...	...	...	...	240	255	215	...a	...a	230	...	...	...
25	...	...	...	...	240	230	...	...a	...a	...a	...	...	...
26	...	...	...	...	245	235	220	230	225	...	...	...	...
27	...	...	...	...	225	225h	225	...	230	230	...	...	...
28	...	...	...	...	q245	...a	...a	...a	...a	...a	...	...	...
29	...	...	...	...	...	...	...a	...a	230	...	...	...	...
30	...	...	...	...	...c	230	230	220	225	250	...	...	...
31													
* MEAN	...	...	...	237	238	224	217	222	222	228	...	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 342

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1945 JUNE 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.8	0.9	0.8	0.9	0.8	1.0	0.9	0.8	0.8	0.6	...
2	...	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.6	...
3	...	q0.5e	0.6	0.7	0.7	0.7	0.7	0.9	0.8	0.7	0.7	0.7	...
4	...	0.6	0.7	1.0	0.9	0.7	0.9	0.8	0.9	0.8	0.7	...	...
5	...	...e	0.7	0.8	0.7	0.7	0.7	0.6	0.7	0.6	0.6	...e	...
6	...	0.6	0.7	0.7	0.8	0.9	0.7	0.8	0.7	0.7	0.6	0.6	...
7	...	0.6	0.6	0.7	0.7	0.8	0.9	0.8	0.7	0.8	0.7	0.5	...
8	...	...e	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.5	...
9	...	...e	0.7	...e	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.5	...
10	...	...e	q0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.5	...
11	...	...c	...c	...c	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.6	...
12	...	...e	0.7	0.7	0.8	1.0	0.8	0.7	0.7	0.6	0.5	0.5	...
13	...	...c	...c	0.7	0.7	0.9	0.7	0.7	0.8	0.6	0.7	...	...
14	...	0.5	0.7	0.8	0.6	0.9	0.9	0.9	0.7	0.7	0.7	0.6	...
15	...	0.6	0.7	0.9	0.7	0.7	0.9	0.8	0.7	0.8	0.7	0.6	...
16	...	0.6	0.7	0.7	0.7	0.6	0.7	0.6	0.7	0.7	0.6	0.5	...
17	...	0.5	q0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.6	0.6	...
18	...	p0.5	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	...
19	...	...e	0.6	p0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	...
20	...	0.6	0.6	0.9	1.0	0.7	1.0	p1.0c	0.8	0.7	0.5	...e	...
21	...	...c	...c	0.7	0.9	0.9	0.9	0.9	0.8	0.6	...e	...e	...
22	...	0.5	q0.6	0.7	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	...
23	...	0.6	0.7	0.7	0.8	0.9	0.7	0.6	0.6	0.6	0.5	0.5	...
24	...	...c	...c	0.5	0.8	0.7	0.7	0.8	0.7	0.7	0.6	0.6	...
25	...	...e	0.6	0.6	0.5	0.6	0.6	0.8	0.6	0.8	0.7	0.5	...
26	...	...e	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.6	...e	...e	...
27	...	...e	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.5	0.5	...
28	...	...e	0.6	0.7	q0.6	0.8	0.8	0.8	0.9	0.7	0.6	q0.8	...
29	...	0.5	0.6	0.7	0.9	0.7	1.0	1.0	0.9	p0.8c	0.7	...e	...
30	...	...e	0.7	...c	...c	0.8	0.8	0.7	0.6	0.6	0.6	0.5	...
31													
MEAN*	...	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.4	2.1	2.5	2.7	3.0	3.0	3.1	2.8	2.8	2.2	...a	...
2	...	1.0	2.0	2.5	2.8	3.0	3.0	3.0	2.9	2.5	2.1	1.7	...
3	...	1.7	2.0	2.6	2.9	3.0	3.0	2.9	2.9	2.8	2.5	1.5	...
4	...	1.5	2.1	2.6	2.9	3.0	2.9	2.9	2.9	2.8	2.3	...	...
5	...	1.4	2.2	2.6	2.8	3.0	3.0	3.0	2.7	2.6	2.1	1.5	...
6	...	1.6	2.0	2.5	2.8	3.0	3.1	2.9	2.7	2.7	2.2	1.5	...
7	...	1.7	1.9	2.4	2.7	3.0	3.0	2.8	2.9	2.6	2.1	1.7	...
8	...	1.6	1.9	2.4	2.8	2.9	2.9	2.8	2.9	2.6	2.1	1.6	...
9	...	1.7	2.0	2.5	2.7	2.8	3.0	3.0	2.8	2.5	2.2	1.6	...
10	...	1.7	q1.9	2.5	2.8	3.1	3.1	3.1	2.9	2.7	2.3	1.7	...
11	...	...c	...c	...c	2.9	3.0	3.1	3.0	3.0	2.6	...a	...a	...
12	...	1.6	2.2	2.7	2.9	3.0	3.0	3.0	2.9	2.7	2.3	1.7	...
13	...	...c	...c	2.6	2.8	2.9	3.0	3.1	3.1	2.7	2.3	...	...
14	...	1.6	2.2	2.5	2.7	3.0	3.0	3.1	3.0	2.8	...a	...a	...
15	...	1.6	2.3	2.6	2.9	3.0	3.1	3.0	2.9	2.7	2.3	...a	...
16	...	1.7	2.0	2.5	2.9	3.0	3.1	3.1	3.0	2.6	2.4	1.6	...
17	...	q1.8	2.1	2.5	2.8	3.0	3.1	3.1	3.0	2.7	2.3	1.6	...
18	...	p1.6	2.1	2.6	2.9	3.0	3.1	3.1	2.9	2.8	2.2	...a	...
19	...	1.4	2.1	p2.6	2.9	3.1	3.1	3.1	2.8	2.5	2.2	...a	...
20	...	1.6	1.9	2.5	2.9	3.1	3.2	p3.2c	q2.9	2.8	2.2	...a	...
21	...	...c	...c	2.7	2.9	3.1	3.1	3.1	2.9	2.8	2.0	...a	...
22	...	1.6	q2.0	2.6	2.9	3.0	3.1	3.0	3.0	2.7	2.3	...a	...
23	...	1.6	2.4	2.7	2.9	3.0	3.1	3.0	3.0	2.8	2.2	...a	...
24	...	...c	...c	2.7	2.8	3.0	3.1	...a	...a	...a	...a	...a	...
25	...	...a	1.9	2.5	2.8	2.9	3.0	3.0	2.9	2.7	...a	...a	...
26	...	1.6	2.5	2.4	2.8	3.0	3.0	2.9	2.9	2.6	2.3	...a	...
27	...	1.5	2.4	2.5	2.8	2.9	3.2	3.0	2.8	2.9	2.3	...a	...
28	...	1.4	2.1	q2.6	q2.8	p2.9a	3.1	2.9	p2.8a	2.7	...a	...a	...
29	...	1.5	2.3	2.5	2.8	2.9	2.9	2.9	2.9	p2.6	...a	...a	...
30	...	...a	2.1	...c	...c	2.9	2.9	3.0	2.9	p2.6a	2.2	1.8	...
31													
MEAN*	...	1.6	2.2	2.6	2.8	3.0	3.0	3.0	2.9	2.7	2.2	1.6	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 343

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1945 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JULY 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.1	3.2	3.6	3.9	3.8	3.4	2.5	3.6	4.9	5.7	6.0	8.0	7.1	7.8	9.3	9.6	7.7	7.6	5.4	4.0	3.8	3.7	3.6f	4.3f	5.2
2	4.1	3.3f	3.5f	2.9f	2.8f	2.4	2.5	3.6	5.4	7.0	6.3	6.7	7.4	5.5	6.9h	6.2	6.7	5.8	4.6	3.0	2.6	2.5	3.1	3.1	4.5
3	2.7	3.0	3.4	3.7	3.1	2.4	2.4	3.5	5.2	5.6	6.5	6.3	6.6	5.7	5.8	6.6	7.1	4.7	4.3	3.1	2.7	2.7	3.4	3.7	4.3
4	3.6	3.5	3.6	3.1	3.5	3.3	2.7	3.4	5.0	5.4	5.3	6.4	6.1	6.1	6.3	6.4	5.5	6.5	4.1	4.0	2.3	2.4	2.5	2.9	4.3
5	2.9	3.1	3.1	3.1	3.2	2.9	2.7	3.5	4.7	5.7	6.2	5.8	6.3	6.5	6.0	6.3h	5.2	4.9	3.8	2.8	2.6	2.6	2.8	2.5	4.1
6	2.7	3.2	2.3	2.8	3.4	2.9	2.6	3.2	4.9	5.7	6.0	6.7	6.0	6.5	5.7	7.6	6.7	6.9	5.5	2.5	2.2	2.7	2.6	3.1	4.4
7	3.2	3.6	3.1	4.0	3.2	2.0	2.1	3.4	5.7	6.7	7.0	6.0	6.0	6.0	6.1	5.5	5.5	4.3	3.7	3.3	2.2	2.6	2.8	2.9	4.2
8	2.6	2.9	3.0	2.6	3.1	2.2	2.2	3.7	6.0	5.9	6.6	6.5h	6.6	6.0	6.3	6.4	6.7	4.7	4.3	2.8	2.5	2.7	2.9	3.0	4.3
9	3.2	3.6	3.7	3.5	3.6	2.8	2.4	3.7	5.6	6.4	6.8	6.7h	6.2	6.6	6.0	7.0	6.3	4.9	4.3	2.7	2.5	2.7	2.6	2.8	4.4
10	3.0	3.0	3.2	3.4	3.4	2.7	2.4	3.8	5.4	6.0h	6.1	6.6	6.0j	6.1	7.4	6.2	5.5	5.0	4.1	3.1	3.5	3.0	3.3	3.5	4.4
11	3.2	3.2	3.4	3.4	3.4	...c	...c	...c	...c	p5.5	5.9	6.4	6.0	6.1	6.7	6.8	5.5	5.2	5.2	3.8	3.6	3.2	4.1	3.2	...
12	3.1	3.4	3.8	4.3	4.1	3.3	2.5	3.6	5.8	5.9	7.1h	6.7	6.1	6.2	7.1	6.8	6.8	5.7	4.4	3.0	3.1	3.7	3.4	3.7	4.7
13	4.0	4.3	4.1	4.2	4.5	4.0	3.2	3.8	5.3	5.9	p6.8	6.8	5.9	6.9	7.1	7.6	6.9j	5.8	4.8	3.9	2.9	3.3	3.9	3.8	5.0
14	3.6	3.9	4.1	4.4	4.3	2.9	3.8	4.4	5.5	6.2	6.9	p6.6	6.6h	5.9	6.9	8.0	6.7	6.0	4.5	3.9	3.3	3.7	4.0	4.1	5.0
15	3.7	3.8	3.9	4.1	4.1	3.6	3.0	3.9	5.5	5.9	6.1	5.9	7.3	5.8	p6.5	6.9	6.0	5.0	5.4	2.8	2.7	2.9	3.4	3.6	4.7
16	3.9	4.5	4.9	4.4	4.6	3.4	3.5	4.2	5.5	6.2	6.4	6.5	6.9h	7.1	7.1h	6.4	6.4h	6.0	4.6	3.5	2.9f	3.4	3.8	3.6f	5.0
17	3.8	3.8	...c	...c	...c	...c	...c	...c	5.7	6.1	6.8	6.5	6.7	7.9	6.5	7.6	7.3	6.3	5.2	3.1	2.9	3.0	3.1	2.9	...
18	3.3	3.3f	3.5	3.6	3.6	4.2	3.0	4.5	6.4	6.7	7.1	6.7	7.0	7.9	8.4	8.3	6.8	6.4	5.0	3.8	3.2f	3.3f	4.1f	3.9f	5.2
19	3.6f	2.9f	5.0f	p4.5f	...c	...c	...c	...c	...c	6.5	6.9	6.0	6.5	7.5	7.5	7.2	6.0h	6.3	4.8	3.0	2.9	3.1f	2.6f	2.7f	...
20	3.2f	3.4f	3.5f	3.4f	3.6f	3.0	2.7	3.9	7.0	7.4	6.9	7.6	6.3	7.2	7.6	7.1	6.7	6.4	5.7	2.5f	2.6f	3.4	3.8	3.9	5.0
21	3.8f	4.1f	4.2	4.0	4.0	3.7	3.2	4.0	5.4	5.8	7.0	7.3	p6.2c	6.6	p6.7c	7.2	6.7	6.1	5.2	3.3	3.0	3.3	4.1	3.9	5.0
22	3.6	3.3	3.8	4.1	4.2	3.7	3.6	4.4	6.1	6.4	6.9	6.8	6.3	6.8	5.9	6.7	6.6	5.5	4.4	3.4	3.4	3.3	3.5	3.6	4.8
23	3.5	4.1f	3.6	4.1	3.7	3.3	3.0	...c	...c	6.2	6.5	6.7h	7.3	6.5	7.0	7.4h	6.7h	6.3	4.5	3.5	3.1	3.1	3.2	3.6	4.9
24	3.7	3.8	3.6	3.4f	3.5f	3.1f	2.3f	4.1	5.5	6.5	6.8	8.4	6.7	7.2	7.5	8.0	6.5	7.7	5.9	3.9	3.8	3.3	3.3	3.0	5.1
25	3.0f	4.0	3.8	4.2	3.5	3.1	2.6	4.0	5.6	p5.6	5.9	5.9	6.3	7.4	6.9	6.6	6.2	5.3	4.2	2.7	2.7	2.8	2.8	2.7f	4.5
26	2.7	2.8f	3.1	3.0f	3.0	2.7	2.5	3.6	5.0	5.3	6.7	6.5	6.3	6.4h	5.7	5.7	6.2	6.4	5.8h	3.4	3.4	3.4	3.5	3.6	4.4
27	3.8	4.1	4.0f	4.2	4.5	4.2	4.0	4.6	5.5	6.2h	5.7	6.6	5.5	6.3	6.6	6.5	5.5	5.2	5.7	3.6	2.9	3.5	3.0	3.4	4.8
28	3.5	3.7	3.8	3.7	3.7	3.8	2.8	3.9	4.7	5.5	5.1	6.1	6.3	5.8	6.5	6.1	6.1	5.6	5.0	4.3	3.3	3.5	3.9	4.1	4.6
29	4.6	4.5	5.0	4.1	4.4	4.1	4.2	5.4	5.1	5.9	5.8	6.4	6.9	6.0	6.3	7.4	6.2	5.9	5.6	4.2	3.5	3.8	3.6	3.5	5.1
30	p3.6	3.8	3.9	4.3	4.0	3.7	2.8	4.0	5.2	5.6	6.0	6.8	7.3	7.3	7.4	p7.7	7.1	p6.7	p4.0	3.8	3.8	3.7	3.6	3.6	5.0
31	4.0	3.7	3.9	3.9	3.3	3.3	3.1	4.2	5.5	6.5	6.2	6.6	7.0	6.7	6.2	5.9	5.9	5.8	4.8	5.0	3.5	3.1	2.8	2.9	4.7
MEAN*	3.4	3.6	3.7	3.7	3.7	3.2	2.9	3.9	5.5	6.1	6.4	6.6	6.5	6.6	6.8	7.0	6.4	5.8	4.8	3.4	3.0	3.1	3.3	3.4	4.7

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 344

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1945 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JULY 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	285	260	250	225	200	235	220	240	260	290	255	280	320	285	270	245	220	235	...a	...a	...a	310	295	...
2	235	245	240	265	280	280	230	245	220	230	270	320	240	300	270	250	p260a	240	225	235	220	245	245	220	250
3	250	270	240	210	210	235	240	235	230	250	270	275	240	260	290	280	...a	...a	215	p205a	210	255	265	265	...
4	250	235	225	220	210	220	210	235	230	235	240	280	290	275	290	245	270	235	200	210	280	250	250	260	244
5	245	250	260	245	235	235	235	240	235	260	240	260	255	265	260	265	240	230	220	245	240	240	215	240	244
6	240	205	225	250	225	220	220	240	230	265	250	285	280	240	260	290	255	225	220	...a	...a	250	305	285	...
7	270	250	280	220	...a	...a	280	240	250	260	245	235	270	p265a	265	260	245	p230a	230	p245a	245	p260a	250	...a	...
8	...a	...a	210	260	225	205	240	235	220	250	260	245	245	280	270	260	240	220	215	215	215	240	235	245	...
9	260	260	220	230	220	195	250	220	230	250	240	245	260	265	250	260	250	215	...a	...a	220	235	240	235	...
10	265	255	245	240	215	195	210	230	230	240	235	250	250	275	270	290	235	235	230	210	225	190	230	230	237
11	250	260	240	230	225	...c	...c	...c	...c	p245	260	260	275	270	270	250	240	230	225	p230a	235	230	220	250	...
12	210	260	260	235	215	210	230	230	240	230	230	255	270	p335	270	250	250	225	215	285	240	235	220	230	243
13	250	240	235	220	235	210	215	220	220	240	p260c	285	285	255	355	250	240	225	220	205	225	235	230	245	242
14	220	250	245	225	220	205	220	230	225	270	245	p265c	275	380	295	275	235	225	210	220	245	260	240	245	247
15	225	240	245	245	220	225	215	225	230	235	265	265	255	300	p265c	255	245	p230a	215	190	255	245	220	245	240
16	260	240	235	240	220	195	225	230	225	250	275	260	265	285	310	315	p270a	225	220	235	255	265	235	250	249
17	250	235	...c	...c	...c	...c	...c	...c	240	240	275	260	290	310	285	240	255	225	p215	235	225	235	245	280	...
18	255	270	250	215	250	245	200	235	240	255	280	270	320	290	270	260	260	230	220	230	215	250	245	230	249
19	245	260	245	p235	...c	...c	...c	...c	...c	240	240	275	240	300	255	260	230	240	220	225	240	240	240	260	...
20	245	250	245	250	220	220	240	230	250	235	255	260	270	280	280	270	250	225	210	180	265	235	240	240	244
21	275	255	230	240	230	210	225	230	230	245	240	325	p305c	280	p265c	270	240	235	210	185	225	245	250	230	245
22	225	260	265	230	215	235	245	230	240	265	260	270	275	270	260	300	235	225	215	245	235	225	235	245	246
23	260	235	225	225	215	220	200	...c	...c	265	260	270	280	300	280	270	240	215	200	205	220	230	265	245	...
24	240	270	250	260	250	220	240	255	240	300	260	250	320	290	260	260	245	245	200	210	215	230	250	255	251
25	255	250	210	230	220	195	240	230	230	p270	265	310	280	265	290	270	240	220	220	215	260	240	240	260	246
26	240	260	265	245	225	215	245	220	230	240	255	255	265	265	255	310	250	250	205	205	220	225	205	250	242
27	240	230	235	240	215	225	230	225	240	245	245	260	350	270	290	250	235	240	215	210	230	230	250	250	244
28	255	240	240	240	230	210	210	210	230	260	240	280	270	315	295	260	240	230	225	210	215	250	250	255	244
29	245	245	215	220	230	225	220	220	220	270	280	290	270	275	325	260	255	230	225	230	240	235	220	230	245
30	p255	260	245	225	210	215	230	230	245	245	250	270	275	270	265	p235	250	p225	p205	245	235	250	250	250	243
31	230	250	230	215	235	270	235	p220	245	270	260	255	270	290	280	250	250	235	220	220	215	220	235	265	244
MEAN*	247	250	240	235	226	220	229	230	233	252	256	269	275	285	278	265	246	229	217	221	233	239	243	250	244

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 345

JULY 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	3.8	4.2	4.2	q4.2	4.1	3.8	...	...	...
2	...	...	...	...	3.9	4.0	4.2	4.2	3.8	...	...	...	...
3	...	...	...	...	4.1	4.0	4.1	4.1	3.5	3.7	...	...	...
4	...	...	...	...	...	4.0	4.3	4.1	3.8	3.7	...	...	...
5	...	...	...	3.6	3.9	4.0	4.2	4.2	3.9	3.6	...	...	...
6	...	...	...	3.6	4.0	4.2	4.3	4.1	4.1	4.0	...	...	...
7	...	...	...	...	p4.0a	4.1	...a	...a	4.1	...	...	...	...
8	...	...	...	3.4	4.0	4.1h	4.3	4.3	4.0	3.8	...	...	...
9	...	...	...	3.8	4.0	4.2	4.4	4.2	4.1	...	...	...	...
10	...	...	...	...	4.2	4.2	4.3	...	4.2	...	...	...	...
11	...	...	...	...	4.1	4.2	4.4	4.3	4.0	3.8	...	...	...
12	...	...	...	...	4.2	4.4	4.3	p4.2a	4.2	p3.9a	...	...	...
13	...	...	...	...	...	4.2	4.4	4.3	4.4	4.1	...	...	...
14	...	...	...	...	4.1	p4.2a	4.4	4.8	q4.2	3.8	...	...	...
15	...	...	...	...	...	...	4.4	...	...	4.0	...	...	...
16	...	...	...	...	4.4	4.3	4.4	4.4	4.6	4.3	...	...	...
17	...	...	...	...	4.3	4.3	4.4	4.7	4.2	3.8	...	...	...
18	...	...	...	...	4.3	4.3	4.5	4.3	4.4	3.9	...	...	...
19	...	...	...	3.8	4.1	4.3	4.3	4.5	4.3	4.0	...	...	...
20	...	...	...	3.9	4.2	4.4	4.4	4.4	4.0	4.0	...	...	...
21	...	...	...	...	4.3	4.5	4.5	4.5	p4.2c	...	...	...	...
22	...	...	...	...	4.3	4.4	4.5	4.2	4.3	4.1	...	...	...
23	...	...	...	...	4.2	4.5	4.4	4.5	4.0	4.0	...	...	...
24	...	...	...	4.2	4.2	4.3	4.4	4.3	4.3	3.8	...	...	...
25	...	...	...	...	...	4.4	4.4	4.3	4.2	3.8	...	...	...
26	...	...	...	...	4.2	4.2	4.2	4.3	...	4.3	...	...	...
27	...	...	...	3.4	4.0	4.2	4.6	4.0	4.0	4.0	...	...	...
28	...	...	...	...	...	4.3	4.2	4.4	4.2	3.9	...	...	...
29	...	...	...	...	...	4.3	4.3	4.3	4.2	3.8	...	...	...
30	...	...	...	...	4.1	4.3	4.3	4.2	4.3	...	...	...	...
31	...	...	...	4.0	4.1	4.3	4.3h	4.2	4.2	3.7	...	...	...
* MEAN	...	...	...	3.7	4.1	4.2	4.3	4.3	4.1	3.9	...	...	...

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	230	230	255	235	260	245	...	...	...
2	...	...	...	...	240	210	p220a	195	185	...	...	...	...
3	...	...	...	...	235	215	225	205	195	200	...	...	...
4	...	...	...	...	...	190	245h	220	195	255h	...	...	...
5	...	...	...	225	235	215h	210	185	230	185	...	...	...
6	...	...	...	245	220	200	195	p190a	240h	245	...	...	...
7	...	...	...	...	...a	...a	...a	...a	250h	...	...	...	...
8	...	...	...	195	220h	205h	235	215	225	215	...	...	...
9	...	...	...	220	200	210	185	...a	...a	...	...	...	...
10	...	...	...	...	200	275h	220	...	260	...	...	...	...
11	...	...	...	...	215	220	220	220h	240h	230	...	...	...
12	...	...	...	...	225	p215a	200	...a	...a	...a	...	...	...
13	...	...	...	...	...	220h	...a	...a	200	240	...	...	...
14	...	...	...	...	240	p230c	225	200	q180	215	...	...	...
15	...	...	...	...	...	...	235	...	...	225	...	...	...
16	...	...	...	...	225h	235h	220h	p220a	215	200	...	...	...
17	...	...	...	...	230h	220	220h	210	225	p210a	...	...	...
18	...	...	...	...	220	220	220	205	220	210	...	...	...
19	...	...	...	210	215	p215a	210	p235a	260h	220	...	...	...
20	...	...	...	235	215	200	200	p215a	230h	220	...	...	...
21	...	...	...	...	225	225	240	220	p230c	...	...	...	...
22	...	...	...	...	225	220	200	185	215	220	...	...	...
23	...	...	...	...	225	220	210	210	195	225	...	...	...
24	...	...	...	240	225	220	200	170	210	215	...	...	...
25	...	...	...	...	...	220	220h	240	225	225	...	...	...
26	...	...	...	...	245	210	205	220	...	200	...	...	...
27	...	...	...	195	200	240	235	195	205	230	...	...	...
28	...	...	...	...	...	260	230	215	210	225	...	...	...
29	...	...	...	...	...	...a	...a	220	225	245	...	...	...
30	...	...	...	...	230h	225	220	...a	...a	...	...	...	...
31	...	...	...	220	220	200	185	210h	215	220	...	...	...
* MEAN	...	...	...	221	223	220	217	210	221	222	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 346

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JULY 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...e	0.7	0.7	0.7	0.9	0.9	0.7	0.8	0.8	0.8	0.7	...
2	...	0.5	0.8	0.7	0.7	0.7	0.6	q0.5	0.7	0.7	0.6	0.7	...
3	...	...e	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.7	...
4	...	0.5	0.7	0.8	0.9	0.9	1.0	0.9	0.8	0.7	0.7	0.7	...
5	...	0.5	...e	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.6	...
6	...	0.5	0.6	0.6	0.7	0.7	0.9	0.8	0.8	0.9	0.7	0.7	...
7	...	0.5	0.7	0.7	0.7	0.7	0.9	0.9	0.8	0.7	0.8	0.7	...
8	...	0.5	0.6	0.7	0.9	0.9	0.7	0.8	0.7	0.6	0.8	0.5	...
9	...	0.5	0.9	0.7	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.9	...
10	...	0.5	0.6	0.7	0.7	0.7	0.9	0.9	0.8	0.8	0.7	0.6	...
11	...	...c	...c	0.7	0.9	1.0	1.0	0.7	0.9	0.9	0.7	1.0	...
12	...	0.6	1.1	1.0	1.1	1.1	1.8	1.1	0.9	1.5	1.5	1.3	...
13	...	0.6	1.1	1.0	p1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	...
14	...	0.7	1.0	1.0	1.0	p1.1	1.1	1.0	1.0	0.9	0.9	1.0	...
15	...	0.7	0.8	0.9	0.8	0.9	0.9	0.9	p1.2	1.5	1.0	0.6	...
16	...	0.7	1.1	0.9	1.0	1.1	1.1	1.5	1.1	0.8	0.7	0.8	...
17	...	p0.5c	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.7	0.7	0.7	...
18	...	0.5	1.0	0.8	1.0	0.7	0.8	0.9	0.9	0.9	0.8	0.7	...
19	...	...c	...c	0.9	1.1	1.1	1.0	1.0	0.9	0.8	0.7	0.6	...
20	...	...e	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.8	...
21	...	...e	0.6	0.8	q1.2	q1.2	q1.5	q1.3	0.9	0.9	0.8	0.8	...
22	...	0.6	0.7	0.9	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.7	...
23	...	...c	...c	0.7	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.6	...
24	...	0.5	0.5	0.6	0.6	0.8	0.9	0.9	0.9	0.7	0.7	0.9	...
25	...	...e	0.7	p0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.9	...
26	...	...e	0.7	0.6	0.7	0.9	0.9	0.9	0.7	0.7	0.7	0.7	...
27	...	0.6	1.0	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.8	0.7	...
28	...	0.5	0.6	0.7	0.9	0.6	0.9	0.7	0.7	0.7	0.7	0.6	...
29	...	...e	p0.8	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.6	0.6	...
30	...	...e	0.8	...e	0.9	0.9	0.9	0.7	0.9	p0.8	0.8	q0.8	...
31	...	q0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.8	0.6	0.6	0.9	...
MEAN*	...	0.6	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.6	2.0	2.5	2.8	p2.8a	2.9	3.0	2.8	2.6	2.3	p1.8a	...
2	...	1.4	2.0	2.3	2.9	2.8	2.7	2.6	2.6	...a	...a	...a	...
3	...	1.3	1.9	2.4	2.8	2.8	2.9	2.8	2.6	2.6	...a	...a	...
4	...	1.5	2.1	2.5	p2.8a	2.8	2.9	2.9	2.9	2.6	2.2	...a	...
5	...	1.5	2.0	2.4	2.7	2.6	2.8	2.9	2.8	2.6	2.2	1.8	...
6	...	1.5	1.9	2.4	2.6	2.8	2.9	2.9	2.8	2.6	2.0	1.7	...
7	...	1.5	2.2	p2.7a	2.9	3.0	2.5	2.8	2.8	2.3	...a	...a	...
8	...	1.5	2.0	2.5	2.5	2.8	2.9	3.0	2.9	2.8	2.3	1.9	...
9	...	1.5	2.0	2.4	2.7	2.9	3.0	...a	...a	2.7	2.3	1.7	...
10	...	1.4	2.2	2.5	2.8	3.0	3.0	2.9	2.9	2.7	p2.6a	2.3	...
11	...	...c	...c	q2.5	2.8	2.9	3.0	3.0	3.0	2.8	2.4	1.9	...
12	...	1.6	2.5	2.5	2.9	3.0	3.0	3.2	3.0	2.8	2.3	1.6	...
13	...	1.6	2.1	2.7	p3.0	3.1	3.1	3.2	3.0	2.8	2.4	1.7	...
14	...	1.6	2.0	2.5	2.9	p3.1	3.2	3.2	3.0	2.8	2.5	2.0	...
15	...	1.5	1.9	2.6	2.9	3.1	3.2	3.1	p3.0	2.8	2.4	p1.9a	...
16	...	1.5	2.0	2.7	3.0	3.1	3.0	3.0	3.0	2.8	p2.4a	1.9	...
17	...	p1.5c	2.2	2.6	2.9	3.0	3.1	3.1	2.9	2.6	2.3	1.8	...
18	...	1.4	2.2	2.6	2.8	3.0	3.0	p2.9a	2.8	2.6	2.5	1.7	...
19	...	...c	...c	2.6	2.7	...a	...a	...a	...a	2.8	2.3	1.8	...
20	...	1.7	2.2	2.6	3.0	3.0	3.1	3.0	3.0	2.8	2.4	1.7	...
21	...	1.7	2.1	2.5	2.9	3.2	3.2	3.3	3.1	2.5	2.5	1.8	...
22	...	1.7	2.3	2.6	2.9	3.2	3.3	3.2	3.0	p2.6a	2.4	1.9	...
23	...	p1.6c	...c	2.6	3.0	3.2	3.2	q2.9	3.1	2.9	2.5	1.8	...
24	...	1.5	2.0	2.6	2.8	3.0	3.2	3.1	3.0	2.9	2.4	1.9	...
25	...	1.7	2.0	p2.5	2.8	3.0	3.0	3.1	3.0	2.9	2.3	2.0	...
26	...	2.0	2.1	2.4	2.8	2.9	3.2	3.1	3.0	2.7	2.5	1.7	...
27	...	1.6	2.0	2.5	2.8	2.9	3.1	3.0	2.9	2.7	2.3	2.0	...
28	...	1.7	2.1	2.5	2.8	2.9	3.1	3.0	2.9	2.6	2.5	1.9	...
29	...	1.6	2.1	2.8	2.8	3.0	2.9	2.9	2.8	2.7	2.3	...a	...
30	...	1.7	2.1	2.5	2.7	2.9	3.0	3.0	2.8	p2.8	2.5	q1.9	...
31	...	q1.5	2.1	2.5	2.7	2.9	3.0	3.0	2.9	2.7	2.4	1.9	...
MEAN*	...	1.6	2.1	2.5	2.8	3.0	3.0	3.0	2.9	2.7	2.4	1.8	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 347

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1945 | AUGUST 1945

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.0	3.1	3.3	3.4	3.1	2.4f	2.0f	3.6	4.9	5.4	5.8	5.9	5.8	6.2	6.3	6.5	6.5	5.9	4.2	4.6	2.8	2.7	2.6	2.6	4.3
2	2.8	3.3	3.4	3.9	3.5	3.3	3.0	4.1	5.5	5.4	5.9	6.3	7.3	6.8	8.0	6.8	6.7	5.6	4.5	4.0	3.5	3.5	3.7	3.0	4.7
3	3.2	2.8	2.9	3.3	3.5	3.6	3.5	4.1	5.2	5.8	6.0	5.9	7.0	5.9h	6.3	6.2	5.9	5.8	4.8	4.0	3.0	2.9	3.2	3.7	4.5
4	3.9	3.5	3.5	3.7	4.0	3.8	3.8	4.5	5.7	5.7	6.1	6.8	6.1	6.8	6.6	6.6	5.2	5.5	5.2	3.1	3.2	3.1	2.7	2.8	4.7
5	3.0	3.2	3.2	3.6	3.0	2.9	3.4	4.0	4.9	5.5	6.4	5.6	5.6	6.9	6.0h	6.5	5.5h	5.9	4.9	3.7	3.8	2.9	3.2	3.3	4.4
6	3.6	3.6	3.7	3.7	4.0	4.3	2.8	4.2	4.7	5.6	6.0	6.3h	6.3	6.8	6.5	6.3	5.9	5.3	5.1	4.8	3.7	3.4	3.4	3.2	4.7
7	3.3	3.4	3.7	3.7	3.6	3.5	3.3	4.6	5.8	5.8	5.9	5.6	5.5	5.7	5.7	5.7	6.1	5.6	5.4	4.2	3.1	3.2	3.1	2.9	4.5
8	2.8	2.6	2.9	2.8	3.3	3.1	2.6	4.1	5.2	6.6	7.3	6.3	6.6	6.7	6.5	6.2	5.8	5.5	5.3	4.2	2.8	3.4	3.4	3.5	4.6
9	3.4	3.7	3.9	4.2	4.4	4.2	3.3	4.4	5.4	6.4	6.4	7.1	7.2	6.6	7.2	6.2	6.4	6.0	5.4	4.3	3.0	2.9	3.2	3.0	4.9
10	3.3	3.4	3.7	4.0	4.1	3.7	3.0	4.5	5.4	6.0	6.0h	6.7	6.5	6.7	7.0	6.5	6.9	6.2	4.0	4.0	3.2	3.3	3.4	3.5	4.8
11	3.6	3.6	4.1	4.4	4.6	4.1	3.4	4.5	5.6	6.1	6.0	6.6	6.6	6.8	7.2	7.3	6.3	5.5	5.3	5.1	3.0	3.6	3.9	4.2	5.1
12	4.4	4.5	4.8	4.8	4.6	4.4	3.9	4.8	5.9	6.6	6.4	7.6	7.0	6.6h	6.2	7.3	6.9	6.8	6.0	4.3	3.1	3.5	3.3	3.0	5.3
13	3.2f	3.7	4.0	4.3	3.7	3.6	2.9	4.5	5.6	6.0	6.2	7.1	7.8	6.9	7.1	6.9	6.2	7.2	6.6	3.5	2.5	2.7	2.6	2.8	4.9
14	3.0	3.2	3.4	3.4	3.2	3.0	2.6	4.9	5.8	6.1	7.0	6.7	7.1	6.4	6.5	6.6	6.6	6.1	5.2	4.1	3.7	3.8	3.8	3.8	4.8
15	3.9	3.9	4.0	3.9	3.5	2.5	2.5	4.6	p5.7	6.4	6.3	7.3	7.0	6.5	6.6	7.3	6.1	5.5	4.8	4.0	3.7	2.7	2.4	2.5	4.8
16	2.6	2.8	2.9	3.2	2.9	2.6	2.4	4.6	5.9	6.6	6.6	7.8	7.3	7.3	6.0	7.3	6.9	6.1	6.1	4.5	3.5	3.4	3.6	3.2	4.9
17	3.5	3.7	4.0	3.9	3.9	3.5	2.7	4.8	5.7	6.4	6.7	6.8	7.5	6.5	6.9	7.1	6.6	6.8	5.9	4.2	p2.9	3.0	3.3	3.4	5.0
18	3.1	3.1	3.2	3.4	3.5	3.0	3.1	4.9	5.8	6.6	6.1	6.9	6.9	6.9	7.5	6.9	6.7	6.0	5.6	4.5	3.1	3.6	3.3	3.0	4.9
19	3.3	3.4	3.6	3.7	3.4	3.6	3.5	4.9	5.5	5.8	6.6	6.7	7.2	6.6	6.8	7.2	6.5	6.6	p5.4	p4.4	3.2	3.2	3.1	3.6	5.0
20	3.3	3.3	3.6	3.8	4.0	3.2	3.0	4.7	5.7	6.3	6.6	6.8	6.4h	6.9	6.6	6.8	7.0	6.1	5.4	4.4	3.4	3.1	2.9	3.1	4.9
21	3.2	3.4	3.4	3.5	3.8	3.7	3.5	5.4	6.0	6.3	6.7	6.5	6.4	6.6	7.2	7.5j	6.6	5.5	4.7	3.9	3.1	3.8	4.2	4.3	5.0
22	4.5	5.0	3.8	4.2	4.1	4.3	4.3	5.2	6.4	7.2	6.5	7.6j	6.7	7.2	p6.9	7.1	6.2	5.1	4.9	4.0	2.5	2.6	2.7	2.8	5.1
23	2.8	3.1	3.3	3.8	4.0	3.8	3.7	5.3	5.6	p5.3	p5.5	p6.7	p7.2	p8.5	p8.5	p7.3	p6.3	5.3	5.2	4.8j	p4.4	4.2	4.1	4.1	5.1
24	4.0	3.4	3.2	3.2	3.0	3.1	3.0	4.9	p5.8	p6.4	6.6	7.1	7.0	6.1	7.5	6.1	6.2	5.2	4.8	4.0	3.0	3.4	2.9	2.7	4.7
25	2.9	3.0	3.0	3.0	2.9	2.8	2.8	4.7	5.3	5.6	6.0	5.9	5.6	5.3	5.6	6.3	6.0	5.7	5.1	3.5	2.8	2.7	2.6	2.7	4.2
26	2.9	2.8	2.9	2.9	3.0	3.1	3.1	4.5	5.5	5.8	6.1	6.0	5.8j	6.0	6.7	6.0	6.3	5.5	5.4	5.0	4.3	4.1	3.9	3.6	4.6
27	3.5	3.6	3.6	3.7	3.2	...c	...c	...c	...c	6.3	6.4	6.1	6.5	5.8	5.5	6.0	5.5h	5.2	4.2	3.5	3.1	3.0	3.1	3.0	...
28	3.0f	3.0f	2.8f	2.8f	2.3f	3.0f	3.2	5.0	5.2	6.1	6.2	6.0	7.6	9.8	10.2	9.6	5.0	5.2	4.5	4.8	4.6	4.8	5.0	3.7	5.1
29	2.6	2.8	2.8	3.1	3.1	3.2	3.2	4.7	5.3	5.2	5.5	6.0	6.4	6.4	6.8	p7.4	6.1	6.4	5.1	3.2	2.7	3.1	3.2	3.4	4.5
30	3.7	4.0	3.9	3.8	3.7	3.6	3.5	4.6	5.5	6.1	6.0	6.0	5.7	6.3	6.9	6.5	6.2	5.5	5.5	4.6	3.7	3.1	2.5	2.5	4.7
31	2.6	2.7f	2.7f	2.8f	...f	2.6f	2.5f	4.6	5.2	5.4	5.8	6.1	5.9	7.4	6.3	5.9	6.2	5.6	5.4	4.5	3.8	3.0	2.6	2.6	...
MEAN*	3.3	3.4	3.5	3.6	3.4	3.4	3.1	4.6	5.5	6.0	6.2	6.5	6.6	6.7	6.8	6.8	6.2	5.8	5.2	4.2	3.3	3.3	3.3	3.2	4.8

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 348

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1945 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — AUGUST 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	260	250	260	245	225	200	220	215	230	245	265	260	280	260	285	270	240	215	235	220	210	250	240	230	242
2	240	225	250	225	240	240	200	220	235	p255	265	340	270	320	270	250	240	225	225	225	220	240	230	245	246
3	230	210	245	250	230	225	215	225	225	260	265	290	285	235	250	250	250	225	205	230	220	240	245	235	239
4	235	225	230	235	225	215	230	230	240	260	265	260	255	275	270	245	230	235	220	215	245	235	235	255	240
5	230	235	235	220	205	235	230	230	240	270	260	270	300	275	260	265	260	240	220	225	210	255	235	260	244
6	250	235	240	245	235	215	195	225	230	300	310	290	290	285	285	250	220	240	230	220	220	250	230	220	246
7	250	250	240	250	230	230	240	230	245	230	290	300	300	300	300	290	250	230	220	215	220	220	215	240	249
8	250	270	250	240	230	230	200	230	240	290	260	295	290	295	300	280	260	235	220	200	235	235	250	215	250
9	240	255	250	255	230	230	200	230	230	270	300	285	275	270	265	275	260	245	225	205	215	230	230	270	248
10	260	255	240	240	235	200	200	230	235	270	310	290	290	330	295	260	265	230	215	235	230	220	250	250	251
11	250	250	250	250	250	210	210	220	245	250	300	300	290	290	285	285	250	230	215	210	215	250	240	245	250
12	245	260	235	215	250	225	215	245	240	275	295	275	270	300	340	290	270	250	220	210	260	250	300	275	259
13	270	245	265	260	265	230	200	235	240	250	270	280	270	315	295	295	230	265	220	210	...a	260	240	295	...
14	290	280	320	245	230	235	...a	240	250	270	285	285	285	300	290	300	265	240	235	220	250	...a	285	250	...
15	260	235	240	250	230	265	270	240	p240	270	275	300	255	265	340	250	240	240	230	230	220	230	240	275	254
16	245	260	255	240	p250	p235	250	230	230	290	310	275	265	290	250	275	265	240	220	200	225	240	240	225	250
17	265	260	250	255	225	200	260	235	250	260	310	300	270	295	330	265	250	235	220	220	p260	250	255	240	257
18	245	260	260	250	220	245	220	230	240	240	280	300	275	360	270	p260	250	235	215	200	250	215	255	245	251
19	260	250	250	240	240	240	235	220	230	260	260	275	310	330	295	265	250	245	225	p210	...a	245	260	240	...
20	265	260	250	250	220	210	230	230	240	260	300	280	270	300	275	270	270	240	230	220	250	240	250	245	252
21	260	265	260	260	240	p200	p210	240	240	260	270	260	300	p325	310	250	245	210	230	200	265	265	270	250	254
22	250	220	220	255	230	230	230	240	260	265	290	255	275	270	p265	265	215	220	240	200	230	250	240	250	244
23	260	245	240	240	250	245	255	230	240	...c	...c	...c	...c	...c	...c	...c	...c	...c	p240	p225	p240	p250	p220	p220	...
24	p205	p220	p220	p230	p250	p250	p250	p250	...c	p260	280	260	...c	...c	p245	270	260	240	220	220	235	240	220	240	...
25	240	240	220	230	240	235	240	230	240	280	265	270	280	310	295	275	245	230	220	220	235	225	230	250	248
26	250	250	...a	250	235	240	240	220	245	245	280	270	265	330	250	280	270	230	...a	225	220	230	240	230	...
27	240	230	230	220	230	...c	...c	...c	...c	255	280	260	285	300	275	260	250	230	220	225	240	255	235	250	...
28	240	255	240	220	200	250	230	245	220	260	285	460	400	315	290	230	200	250	220	255	275	250	220	205	259
29	210	245	225	230	250	260	210	215	260	275	230	290	270	300	270	p230	230	240	200	215	225	245	235	250	...
30	245	235	220	225	210	240	210	220	240	255	235	260	300	p275	285	250	270	260	200	210	210	220	...a	250	...
31	275	250	290	280	...f	...a	230	210	200	200	295	285	300	285	270	280	230	240	200	215	220	...c	215	225	...
MEAN*	249	246	246	242	233	230	225	230	238	261	283	287	285	296	294	266	238	236	221	224	233	241	242	244	249

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 349

AUGUST 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	3.5	4.1	4.2	4.3	4.1	4.1	3.8	...	...	...
2	...	...	...	...	4.3	4.4	4.2	4.4	4.2	3.7	...	...	...
3	...	...	...	...	4.0	4.3	4.4	4.1	4.0	3.6	...	...	...
4	...	...	...	3.9	4.3	4.4	4.1	4.0	4.1	4.0	3.1	...	...
5	...	...	...	4.0	4.2	4.3	4.3	4.3	q4.0	4.0	...	...	...
6	...	...	...	4.3	4.2	4.4	4.3	4.2	4.3	4.1	...	...	...
7	...	...	...	3.8	4.3	4.5	4.5	4.5	4.4	4.1	...	...	...
8	...	...	...	4.2	4.4	4.5	4.4	4.6	4.3	4.1	...	...	...
9	...	...	...	4.2	4.7	4.4	4.6	4.4	4.0	3.9	...	...	...
10	...	...	...	4.2	4.6	4.6	4.6	4.5	4.0	4.4	...	...	...
11	...	...	...	...	4.3	4.5	4.6	4.4	4.5	4.2	...	...	...
12	...	...	...	4.2	4.5	4.5	4.5	4.6	4.5	4.3	3.6	...	...
13	...	...	...	...	4.4	4.6	4.7	4.5	4.3	4.3	...	...	...
14	...	...	...	4.0	4.3	4.5	4.6	4.6	4.2	4.3	3.8	...	...
15	...	...	...	4.0	4.5	4.6	4.6	4.6	4.5	...	...	...	...
16	...	...	...	4.1	4.5	4.6	4.6	4.5	...	...	3.6	...	...
17	...	...	...	4.2	4.6	4.7	4.5	4.6	4.9	...	...	...	...
18	...	...	...	...	4.4	4.6	4.5	4.7	4.5	...	...	...	...
19	...	...	...	4.2	4.3	4.5	4.6	4.8	4.4	4.2	3.7	...	...
20	...	...	...	4.1	4.5	4.5	4.6	4.5	4.4	3.9	...	...	...
21	...	...	...	4.2	4.4	4.4	4.5	4.6	4.4	4.2	3.7	...	...
22	...	...	...	4.0	4.4	4.4	4.5	4.5	4.5	q4.0	...	...	...
23	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
24	...	...	...	q4.1	4.3	4.3	...c	...c	...c	4.1	...	...	...
25	...	...	...	4.2	4.3	4.3	4.4	4.4	4.2	4.1	...	...	...
26	...	...	...	4.0	4.3	4.4	4.4	4.4	4.3	4.1	3.4	...	...
27	...	...	...	4.0	4.3	4.4	4.3	4.3	4.2	...	3.7	...	...
28	...	...	...	4.0	4.4	4.4	4.6	4.3	4.3	4.0	...	...	...
29	...	...	...	4.0	4.3	4.3	4.4	4.3	4.3	...	...	...	...
30	...	...	...	4.1	4.3	4.3	4.3	q4.4	4.3	4.1	3.7	...	...
31	...	...	...	...	4.3	4.4	4.4	4.2	4.3	4.0	...	...	...
* MEAN	...	...	...	4.1	4.4	4.4	4.5	4.4	4.3	4.1	3.6	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	185	230h	225h	225	215	195	205	...	...	...
2	...	...	...	...	215	220h	220	220	210	200	...	...	...
3	...	...	...	...	200	230h	215	210	225	200	...	...	...
4	...	...	...	195	250h	225	190	175	245h	q225	195	...	...
5	...	...	...	245h	245	230	220	230	q225	230	...	...	...
6	...	...	...	260	230	230	220	250	...a	220	...	...	...
7	...	...	...	280	230	230	250	230	225	230	...	...	...
8	...	...	...	250	240	210	200	...h	215	225	...	...	...
9	...	...	...	q215	230	230	220	220	210	200	...	...	...
10	...	...	...	210	230	230	230	200	205	210	...	...	...
11	...	...	...	...	240	240	225	215	210	230	...	...	...
12	...	...	...	230	220	245	210	230	200	220	200	...	...
13	...	...	...	...	240	225	270h	210	205	235	...	...	...
14	...	...	...	210	210	200	205	225	240	225	230	...	...
15	...	...	...	245	205	q230	230	200	210	...	...	...	...
16	...	...	...	225	220	245	225	200	...	...	230	...	...
17	...	...	...	240	240	210	240	210	210	...	...	...	...
18	...	...	...	...	245	240	245	220	220	...	...	...	...
19	...	...	...	230	230	230	225	225	210	230	200	...	...
20	...	...	...	240	235	235	225	200	220	200	...	...	...
21	...	...	...	200	240	240	220	q225	200	220	215	...	...
22	...	...	...	250	220	210	230	q250	230	q200	...	...	...
23	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
24	...	...	...	q225	210	245	...c	...c	...c	225	...	...	...
25	...	...	...	215	220	215	205	215	200	210	...	...	...
26	...	...	...	225	210	215	190	180	190	200	195	...	...
27	...	...	...	225	225	230	215	210	210	...	200	...	...
28	...	...	...	260	245	200	225	240	235	230	...	...	...
29	...	...	...	215	220	200	210	200	195	...	...	...	...
30	...	...	...	200	210	215	200	q210	210	210	190	...	...
31	...	...	...	...	205	215	195	210	210	210	...	...	...
* MEAN	...	...	...	228	226	225	220	215	213	216	206	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 350

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

AUGUST 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	...	...
2	...	...e	0.6	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.6	0.7	...
3	...	...e	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	...
4	...	0.5	0.7	0.6	0.7	0.7	0.9	0.7	0.6	q0.6	0.7	0.7	...
5	...	...e	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.6	q0.8	...
6	...	0.5	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.7	0.7	...
7	...	...e	0.7	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.8	0.8	...
8	...	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.8	0.9	0.7	0.6	...
9	...	...e	0.6	0.6	...e	0.6	0.6	0.6	0.6	0.5	0.6	0.6	...
10	...	0.6	0.9	0.9	0.8	0.9	0.9	0.7	0.7	0.7	0.7	0.7	...
11	...	...e	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.7	0.7	...
12	...	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.6	...
13	...	...e	0.7	0.7	0.6	0.6	0.7	0.8	0.7	0.7	0.6	0.6	...
14	...	0.7	0.7	0.7	0.8	0.9	1.1	0.9	0.8	0.7	0.6	q0.6	...
15	...	...e	p0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...
16	...	...e	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.7	0.7	0.6	...
17	...	...e	1.0	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	...
18	...	...e	0.7	0.7	0.8	0.7	0.8	0.9	0.7	0.7	0.6	0.7	...
19	...	...e	0.6	0.5	0.6	0.7	0.8	0.7	0.7	0.8	0.6	0.6	...
20	...	...e	0.6	0.6	0.6	0.6	0.7	0.7	1.0	0.9	0.7	0.6	...
21	...	0.6	1.0	0.7	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.6	...
22	...	0.6	0.7	0.7	0.7	0.7	0.6	0.8	0.7	0.6	0.6	0.6	...
23	...	0.6	0.7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
24	...	...c	...c	q0.7	0.8	0.6	...c	...c	0.8	0.7	0.7	0.7	...
25	...	...e	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	...
26	...	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	...
27	...	...c	...c	0.7	0.6	q0.7	0.7	0.6	0.6	0.7	0.7	0.8	...
28	...	...e	0.5	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	...e	...
29	...	...e	0.7	...e	0.7	0.7	0.7	0.9	0.7	p0.6	0.7	...	...
30	...	...e	0.6	0.7	0.7	0.7	0.7	q0.7	0.7	0.7	0.8	...	...
31	...	0.7	0.7	0.7	0.7	0.7	0.6	0.8	0.7	0.7	0.7	...	...
MEAN*	...	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.7	2.1	2.4	2.8	2.9	3.0	3.0	2.9	2.8	2.4	...	...
2	...	1.6	2.2	2.6	2.8	2.9	3.0	3.0	2.9	2.7	2.4	1.9	...
3	...	1.4	2.2	2.5	2.8	3.0	3.0	3.1	2.9	2.7	2.5	1.7	...
4	...	1.7	2.1	2.5	2.8	3.0	3.0	3.0	3.0	q2.9	2.5	1.7	...
5	...	1.1	2.1	2.5	2.9	3.0	3.0	3.1	3.0	2.7	2.5	1.9	...
6	...	...	2.3	2.8	2.9	3.1	3.2	3.2	3.0	2.7	2.3	...a	...
7	...	1.2	2.2	2.7	3.0	3.1	3.2	3.1	2.9	2.8	2.5	1.8	...
8	...	1.5	2.4	2.8	3.0	3.2	3.2	3.3	3.1	2.9	2.6	2.0	...
9	...	1.4	2.4	2.7	3.0	3.2	3.2	3.1	...a	2.9	2.5	2.1	...
10	...	1.4	2.4	3.0	3.0	3.2	3.2	3.2	3.1	3.0	2.5	2.0	...
11	...	1.5	2.4	2.9	3.2	3.2	3.4	3.3	3.0	3.0	2.6	1.9	...
12	...	q1.3	2.3	2.8	3.1	3.1	q3.2	3.1	q2.9	3.0	2.7	1.9	...
13	...	1.4	2.3	2.8	3.0	3.2	3.1	3.4	3.1	3.0	q2.6	...a	...
14	...	1.3	2.5	2.8	q3.0	3.1	3.0	2.9	3.2	2.8	2.6	2.0	...
15	...	1.5	p2.5	2.8	3.0	3.2	3.2	3.2	3.1	2.9	2.6	1.9	...
16	...	1.5	2.3	2.7	3.0	3.1	3.2	3.2	3.2	3.0	2.4	...a	...
17	...	1.8	2.4	2.7	3.0	3.3	3.1	3.3	3.1	3.0	2.6	q1.8	...
18	...	...a	2.5	3.0	3.2	3.3	3.2	3.1	3.1	2.9	2.6	1.9	...
19	...	q1.9	2.4	2.8	3.0	3.1	q3.2	q3.3	q3.2	q3.0	...a	1.8	...
20	...	1.5	2.4	2.8	3.0	3.1	q3.2	3.1	3.0	2.9	2.8	q1.8	...
21	...	1.4	q2.3	2.8	3.1	3.0	q3.3	3.2	3.2	3.0	2.7	2.1	...
22	...	q1.5	2.3	2.7	3.0	3.1	3.2	3.1	3.0	2.9	...a	1.9	...
23	...	1.4	2.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
24	...	...c	...c	q2.8	3.0	3.0	3.0	3.1	3.0	2.8	2.4	2.0	...
25	...	1.6	2.3	2.7	2.9	3.0	3.0	3.1	3.1	2.9	2.5	2.0	...
26	...	1.7	2.4	2.8	3.0	3.1	3.1	3.1	3.1	2.5	2.5	1.9	...
27	...	...c	...c	2.7	2.9	q3.0	3.1	q3.1	3.0	2.8	2.5	1.7	...
28	...	1.7	2.3	2.7	3.0	3.1	3.1	3.1	3.0	2.9	2.6	2.0	...
29	...	q1.4	2.4	2.7	3.0	3.0	2.9	3.1	3.0	...a	...	...	...
30	...	1.7	2.3	2.7	2.9	3.0	3.1	q3.0	2.9	2.5	2.1	...	...
31	...	q1.5	2.4	2.8	2.9	3.1	3.1	3.0	3.1	2.9	2.6	...	...
MEAN*	...	1.4	2.3	2.7	3.0	3.1	3.1	3.1	3.0	2.9	2.5	1.9	...

*=ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 351

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1945 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — SEPTEMBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	2.8f	2.8f	2.9f	2.8	2.9	2.9f	...c	...c	5.5	6.0	6.0	5.5	5.8	6.8	7.5	6.7	6.0	6.3	5.5	4.1	2.9	3.0	3.0	3.1	...
2	3.2	3.2	3.8	4.0	3.7	3.8	3.9	5.3	5.7	6.0	6.6	6.5	6.7	7.8	7.3	6.8	6.2	5.5	6.1	5.7	4.8	3.9	3.7	3.9	5.2
3	4.1	4.4	4.4	4.1	3.8	4.0	4.1	5.7	6.9	6.8	7.3	7.4	7.0	7.4	6.9	6.2	6.3	6.0	p5.6	5.3	4.1	4.3	3.9	3.7	5.4
4	3.5	3.6	3.5	3.7	3.6	4.2	4.2	5.5	6.2	6.4	7.2	7.0	7.8	8.5	7.9j	7.4j	p7.0	6.3	6.7	5.5	5.5	5.0	4.4	3.9	5.6
5	2.9	3.2	3.3	3.5	p3.2	3.1j	3.0j	p4.0	4.4	4.8	4.9	5.5	5.8	5.4	5.6	5.9	5.8	5.5	4.7	3.8	3.3	2.9	3.0	3.4	4.2
6	3.4	3.2	3.5	3.6	3.5	3.2	3.3	4.7	5.6	6.1	6.9	7.6	8.1	8.4	8.0	6.8	6.5	6.1	4.8	3.8	3.6	3.5	3.4	3.3	5.0
7	3.4	3.5	3.4	3.5	3.1	2.9	3.0	5.2	5.5	p6.1	6.7	7.0	7.2	7.0	6.7	7.2j	6.9	6.5	5.7	4.3	3.5	2.9	2.9	3.0	4.9
8	3.2	3.4	3.6	3.5	2.9	3.1	3.4	5.1	6.0	6.2h	6.3	6.6	6.9	6.8	6.6	6.3	5.8	5.6	5.6	4.9	4.0	4.3	4.0	...c	...
9	...c	...c	...c	...c	...c	...c	...c	5.1	5.9	6.0	6.8	7.0	6.8	7.4	7.7	6.9	6.6	6.1	5.7	5.1	4.6	4.6	4.3	4.4	...
10	4.3	4.6	4.1	3.8	3.3	3.3	3.5	5.2	5.8	6.5	6.6	6.8	7.0	7.2	7.0	6.3	6.6	6.1	5.8	5.2	4.6	4.6	4.3	4.2	5.3
11	3.9	3.9	4.1	4.2	3.9	3.7	3.8	5.3	6.0	6.5	6.5	7.0	7.4	7.6	7.4	7.3	6.6	6.4	6.1	5.9	5.4	5.2	5.0	5.3	5.6
12	4.9	4.8	4.1	3.4	3.6	3.8	4.1	6.1	6.1	6.9	7.0	7.8	8.3	8.6	8.4	8.5	7.7	6.8	5.8	4.7	4.3	4.6	4.3	4.5	5.8
13	4.5	4.5	4.5	3.6	3.8	3.7	4.1	5.5	5.9	6.9	7.0	7.1	7.6	8.0	7.1	7.3	7.2	6.6	6.0	5.6	4.8	4.7	4.7	4.5	5.6
14	4.4	4.3	3.8	4.2	3.8	4.3	4.4	6.3	7.0	7.0	7.5h	8.1	9.5	8.1h	7.2	7.2	6.5	6.6	5.9	5.2	4.7	4.5	4.3	4.5	5.8
15	4.3	4.2	4.4	4.5	4.2	4.1	4.3	5.4	6.2	6.5	6.7	7.2	7.5	7.3	7.7	7.7	6.7	6.6	6.2	6.0	5.0	4.0	4.0	4.0	5.6
16	3.9	3.9f	p3.7f	p3.5f	3.3f	3.1f	3.6f	5.5	6.4	7.4	7.6	7.4	7.7	7.9	7.2	7.4	6.5	6.1	5.7	4.8	4.0	4.0	4.2	4.1	5.4
17	4.2	4.2	4.2	3.8f	3.8f	4.0f	4.2f	6.2	6.1	6.3	7.1	7.2	9.2	9.4	9.4	9.2	8.6	6.8	5.7	5.7	5.3	5.3	5.3	4.4	6.1
18	4.6	3.8	3.8	3.1	3.2	3.1	3.2	4.4	p4.7	5.0	4.9	5.3	5.5	5.3	5.1	5.4	4.9	4.8	4.6	3.2	3.4	3.6	3.6	3.4	4.2
19	p3.1f	p3.0f	3.2	3.2	3.0	p2.8a	3.1j	4.5	p4.6	4.8	5.5	5.7	5.5	4.9	4.7	5.0	5.0	4.9	4.8	4.7	4.5	p4.1f	4.0	3.7	4.3
20	3.7f	3.7f	...f	2.2f	...f	...f	3.1	4.4	5.1	5.3	5.7	5.9	7.0	7.2	7.2	6.6	6.4	6.1	5.5	4.8	4.0	3.5	3.3	3.2	...
21	3.1	3.0	p2.2a	2.2	2.1	2.0	3.4	5.2	5.5	5.9j	6.5	7.0	8.1	7.6	7.0	6.5	6.1	5.5	5.8	5.5	5.0	4.4	4.2	4.1	4.9
22	3.8	3.5	3.2	3.4	2.4	2.3	3.5	5.0	7.5	p7.6	7.9	9.1	9.0	8.3	7.0	6.9	6.5	6.5	6.0	5.7	4.5	4.2	4.0	4.0	5.5
23	3.8	3.6	3.6	3.4	3.0	3.1	4.3	5.6	6.7	7.1	7.8	8.8	9.1	8.1	7.6	7.4	7.0	6.8	6.3	6.0	4.3	3.8	3.7	4.0	5.6
24	3.9	3.6	3.5	3.2	2.8	2.8	4.0	5.2	6.2	6.6	6.9	7.5	8.2	7.9	7.2	6.8	7.2	7.3j	p6.8	5.9	4.7	4.3	3.9	3.9	5.4
25	4.0	4.1	4.0	3.8	3.6	3.8	4.3	6.0	6.1	6.8	7.9	7.7	6.8	p7.6	7.2	7.0	6.6	6.7	6.3	5.9	5.5	5.1	5.0	5.2	5.7
26	4.9	4.7	5.3	4.0	4.3	4.5	5.0	5.8	6.8	6.9h	6.6	7.6	8.3	9.0	7.8	7.2	6.5	6.2	5.9	5.4	5.0	4.7	4.8	4.8	5.9
27	4.7	4.6	4.1	4.2	4.4	4.4	5.1	6.1	6.7	7.0	7.8	8.6	8.5	7.7	8.0	7.6	6.9	6.4	6.0	5.9	5.4	5.2	5.0	5.1	6.1
28	4.6	4.4	4.4	4.1	4.0h	3.4	4.0	5.6	6.1	6.8	7.2	7.0	7.9	8.6	9.0	8.2	p7.3	7.0	6.7	5.6	4.9	4.3	4.0	p4.3f	5.8
29	p4.0f	p3.8f	3.9	3.3	3.1	3.0	4.3	5.7	6.4	6.4	6.5	p7.0	7.1	7.6	8.1	7.6	7.4	7.0	6.6	5.7	5.1	4.7	4.3	3.9	5.5
30	3.9	4.3	4.4	4.1	4.1	4.1	5.3	6.1	6.5	6.9	7.8	8.0	8.7	9.2	8.8	8.2	7.2	6.9	7.3	6.7	5.8	5.1	5.0	4.0	6.2
31																									
MEAN*	3.9	3.9	3.8	3.6	3.4	3.4	3.9	5.4	6.0	6.4	6.8	7.1	7.5	7.6	7.3	7.0	6.6	6.3	5.9	5.2	4.6	4.3	4.1	4.1	5.3

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 352

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1945 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS SEPTEMBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	210	230	220	240	225	220	...c	...c	230	250	265	300	220	300	270	265	250	225	210	200	235	225	235	235	...
2	p235a	230	210	230	210	220	240	220	210	205	280	300	320	265	260	250	245	240	225	220	210	220	250	250	239
3	p235a	215	205	210	200	230	240	230	250	p250	315	270	280	280	250	260	200	230	p220	210	220	235	220	230	237
4	230	230	220	210	250	240	250	225	230	270	290	280	295	265	p270	p270	p235	230	220	225	250	220	235	215	244
5	240	260	250	p255	p255	p270	270	p240	220	350	490	335	300	350	345	300	275	220	220	225	220	225	270	245	276
6	260	265	220	p220a	225	235	230	230	305	300	300	300	295	280	265	270	265	210	p230a	250	p245a	255	275	260	258
7	245	235	p260	235	200	245	240	235	215	280	300	290	290	270	310	305	275	225	220	205	210	240	245	250	251
8	250	250	225	210	215	230	255	260	240	300	300	290	285	320	300	270	245	220	225	210	225	220	220	235	250
9	250	245	230	225	230	225	230	225	235	295	290	290	300	305	295	275	240	230	225	220	235	240	220	245	250
10	250	240	225	225	210	235	250	230	245	295	310	305	295	295	275	290	265	250	215	210	230	235	230	230	252
11	230	245	245	230	220	210	255	250	p200	275	305	295	300	300	295	280	265	225	225	220	220	240	230	230	250
12	225	210	210	230	280	265	250	220	200	305	310	305	300	295	300	280	270	225	230	220	240	245	260	240	255
13	230	230	215	200	255	240	240	225	230	285	285	295	295	275	295	290	260	235	220	220	215	250	250	240	249
14	230	210	220	230	250	245	250	240	230	290	300	295	265	260	270	275	240	220	230	215	240	235	230	220	245
15	230	235	235	240	220	230	240	240	240	280	300	300	295	285	295	260	260	250	230	225	215	235	240	240	251
16	250	240	250	230	225	230	260	235	230	280	270	295	305	275	290	270	260	235	230	240	230	265	260	240	254
17	235	235	230	230	240	255	250	230	235	265	300	395	290	300	290	280	260	235	240	235	225	270	220	230	257
18	240	250	265	280	285	260	290	280	p390	380	450	430	360	390	410	330	270	p245a	225	225	275	...a	...a	...a	...
19	225	260	305	295	...a	...a	...a	245	p430	480	400	355	345	450	425	p395a	330	p280a	240	...a	...a	230	245	250	...
20	255	240	230	250	280	280	255	240	300	340	325	370	315	290	290	295	210	230	230	220	240	250	270	270	270
21	p245a	230	...a	...a	...a	270	250	240	260	300	280	320	275	280	280	275	270	240	230	225	235	240	245	250	...
22	230	240	p225a	220	235	245	245	240	255	p285	280	290	260	270	270	280	220	220	215	210	240	240	245	235	246
23	225	235	230	215	230	260	240	230	270	290	295	280	270	280	295	280	260	240	230	220	220	p235a	250	p245a	251
24	245	p235a	215	200	225	235	225	225	275	265	285	295	285	270	260	295	290	250	230	200	190	220	250	250	246
25	240	225	210	200	250	250	250	240	270	305	275	270	300	290	285	295	250	240	220	215	230	240	265	250	253
26	240	250	205	225	235	250	250	230	260	250	280	285	310	285	285	270	255	215	230	220	230	240	250	240	250
27	235	240	245	230	220	240	p245	250	265	285	295	285	280	285	285	275	260	230	220	220	240	250	250	230	252
28	240	240	230	235	230	260	250	255	275	290	280	320	300	300	275	275	p220	225	230	215	230	240	240	...a	...
29	...a	...a	250	p245a	240	260	250	245	260	280	295	p315	315	320	280	295	270	230	220	230	225	235	245	245	...
30	250	230	...a	240	250	245	230	235	275	285	295	305	295	295	280	280	235	230	240	235	210	...a	...a	...a	...
31																									
MEAN*	238	237	231	231	235	244	248	238	258	294	308	309	295	297	293	284	255	233	229	220	229	238	244	232	255

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 353

SEPTEMBER 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.1	4.3	4.4	...	4.5	4.5	4.2	3.9	...	...
2	...	...	...	...	4.3	4.5	4.5	4.5	4.3	4.1	3.6	...	...
3	...	...	3.8	4.2	4.7	4.5	4.5	4.5	4.4	...	...	...	...
4	...	...	...	4.3	4.5	4.6	4.5	4.6	4.4	...c	...	...	...
5	...	...	...	4.1	4.3	4.4	4.4	4.5	4.3	4.2	3.9	...	...
6	...	...	4.0	4.4	4.4	4.6	4.4	4.5	4.4	4.3	3.9	...	...
7	...	...	...	4.4	4.5	4.6	4.5	4.5	4.5	4.4	4.4	...	...
8	...	...	...	...	4.5	4.6	4.6	4.6	4.3	4.3	3.7	...	...
9	...	...	...	4.3	4.6	4.5	4.7	4.6	4.6	4.3	...	...	...
10	...	...	...	4.3	4.6	4.7	4.6	4.4	4.5	4.3	q4.0	...	...
11	...	...	...	4.4	4.7	4.6	4.6	4.7	4.6	4.3	3.8	...	...
12	...	...	...	4.4	4.5	4.6	4.7	4.5	4.6	4.3	3.7	...	...
13	...	...	...	4.4	4.6	4.7	4.7	4.5	4.5	4.4	3.7	...	...
14	...	...	...	4.2	4.6	4.6	4.5	4.6	4.4	4.1	...	...	...
15	...	...	...	4.4	4.6	4.6	4.7	4.6	4.5	4.3	3.9	...	...
16	...	...	...	4.4	4.5	4.7	4.6	4.5	4.6	4.3	3.7	...	...
17	...	...	...	4.3	4.4	4.8	4.7	4.6	4.5	4.3	3.9	...	...
18	...	...	q3.7	4.0	4.2	4.3	4.3	4.3	4.3	4.1	3.6	...	...
19	...	...	q3.8	4.0	4.2	4.2	4.2	...a	...a	...a	3.9	...	...
20	...	...	3.9	4.3	4.4	4.5	4.5	4.4	4.2	4.3	...	...	...
21	...	...	4.0	4.4	4.3	4.3	4.3	4.5	4.4	4.3	3.8	...	...
22	...	...	4.2	...c	...c	4.6	4.6	4.5	4.4	4.3	...	...	...
23	...	...	4.2	4.4	4.5	4.5	4.5	4.6	4.5	4.3	4.0	...	...
24	...	...	4.2	q4.4	q4.5	4.6	4.3	4.6	4.6	4.6	4.3	...	...
25	...	...	4.2	4.5	4.3	4.6	q4.7	4.6	4.6	4.5	3.8	...	...
26	...	...	4.0	4.3	4.6	4.3	4.5	4.5	4.2	4.3	3.8	...	...
27	...	...	4.2	4.5	4.7	4.7	4.6	4.7	4.4	4.4	...	...	...
28	...	...	4.2	4.5	4.6	4.7	4.8	4.7	4.6	4.4	...	...	...
29	...	...	4.1	4.5	4.6	4.4	4.8	4.7	4.5	4.4	4.1	...	...
30	...	...	4.2	4.4	4.9	4.7	4.5	4.8	4.6	4.5	...	...	...
31													
MEAN*	...	...	4.0	4.3	4.5	4.6	4.6	4.6	4.5	4.3	3.9	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	215	200	210	...	220	230	215	230	...	...
2	...	...	...	...	200	215	210	210	230	220	220	...	...
3	...	...	210	q200	200	225	200	220	200	...	...	...	...
4	...	...	...	225	230	230	230	235	215	...c	...	...	...
5	...	...	...	195	190	185	200	200	190	205	210	...	...
6	...	...	230	245	220	225	185	190	205	210	210	...	...
7	...	...	...	200	215	220	200	210	215	225	220	...	...
8	...	...	...	...	210	235	205	210	215	220	210	...	...
9	...	...	...	215	235	220	235	220	265	225	...	...	...
10	...	...	...	q270	q275	220	190	200	q225	210	215	...	...
11	...	...	...	215	190	225	225	200	230	230	210	...	...
12	...	...	...	230	220	215	210	215	210	240	210	...	...
13	...	...	...	230	215	215	215	210	210	215	235	...	...
14	...	...	...	260	220	210	q220	210	200	200	...	...	...
15	...	...	...	220	225	225	220	220	215	200	220	...	...
16	...	...	...	230	205	225	225	205	235	225	210	...	...
17	...	...	...	215	230	210	210	p200a	215	220	210	...	...
18	...	...	q205	225	200	q240	210	...a	...a	225	235	...	...
19	...	...	q230	225	220	315	...a	...a	...a	...a	250	...	...
20	...	...	...	225	235	230	210	220	220	230	...	...	...
21	...	...	230	200	220	215	220	240	235	230	230	...	...
22	...	...	230	p205	200	220	215	200	205	200	...	...	...
23	...	...	230	220	205	200	p205	215	200	210	210	...	...
24	...	...	245	225	215	210	200	210	195	205	220	...	...
25	...	...	200	225	210	200	210	195	200	215	225	...	...
26	...	...	230	230	235	210	215	250	200	230	215	...	...
27	...	...	210	225	q250	q250	210	225	215	205	...	...	...
28	...	...	230	220	230	210	215	205	200	220	...	...	...
29	...	...	225	230	220	200	225	205	220	220	220	...	...
30	...	...	235	210	210	225	215	...a	225	220	...	...	...
31													
MEAN*	...	...	224	222	218	221	212	213	215	217	220	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 354

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

SEPTEMBER 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	0.7	0.7	0.7	0.9	0.9	0.8	0.9	0.7	0.7	...e	...
2	...	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.6	0.5	...
3	...	0.6	0.8	q0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	...e	...
4	...	...e	...e	0.6	0.7	0.6	0.7	1.8b	0.6	...c	...c	0.6	...
5	...	...c	0.6	0.7	0.9	0.8	0.8	0.8	0.7	0.9	0.7	0.6	...
6	...	0.5	0.6	0.7	0.8	0.8	0.7	0.6	0.7	0.7	0.6	0.6	...
7	...	0.6	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.6	0.7	...
8	...	...e	0.6	0.8	0.8	0.8	0.8	0.6	0.7	0.6	0.7	0.6	...
9	...	0.5	0.7	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.7	0.5	...
10	...	...e	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.7	...
11	...	0.5	0.7	0.7	0.9	0.7	0.6	0.8	0.8	0.8	0.7	0.7	...
12	...	...e	0.5	0.6	0.7	0.8	0.8	0.8	0.7	0.8	0.6	0.8	...
13	...	0.6	0.7	0.7	0.8	0.9	0.8	0.9	0.8	0.9	0.7	0.6	...
14	...	0.5	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.7	0.8	0.6	...
15	...	...e	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7	...
16	...	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	...
17	...	0.6	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	...
18	...	0.6	q0.6	0.7	0.8	0.8	0.8	0.9	0.7	0.6	0.7	0.6	...
19	...	0.6	q0.6	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.7	...	...
20	...	0.7	0.6	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.7	...
21	...	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.6	0.7	0.6	...	...
22	...	0.6	0.6	p0.7	0.8	0.8	0.8	0.8	0.8	0.8	...	...	...
23	...	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	...
24	...	0.7	1.0	0.9	0.8	0.6	0.9	0.9	0.8	0.8	...e	0.5	...
25	...	0.5	0.6	0.6	0.8	0.8	0.9	1.0	0.9	0.7	...e	...e	...
26	...	...e	...e	0.8	0.8	0.9	0.9	0.8	...e	0.8	0.8	0.7	...
27	...	...e	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.6	0.5	...
28	...	0.6	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.7	0.6	...
29	...	0.6	0.8	0.8	0.9	1.7	0.9	0.9	0.9	0.8	0.7	0.5	...
30	...	0.6	0.8	0.9	0.7	0.9	1.0	0.9	0.9	0.8	0.7	0.6	...
31													
MEAN*	...	0.6	0.7	0.8	0.8	0.9	0.8	0.9	0.8	0.8	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	2.4	2.8	3.0	3.0	3.1	3.0	3.0	2.8	q2.7	1.9	...
2	...	1.8	2.5	2.8	3.0	3.0	3.1	3.0	3.1	3.0	2.6	2.1	...
3	...	1.9	2.1	2.8	3.1	q3.0	3.1	3.1	3.2	2.9	2.9	2.3	...
4	...	1.8	2.5	2.8	3.0	3.1	3.1	p3.1a	3.1	q2.9	2.7	2.0	...
5	...	1.9	2.5	2.8	3.0	3.0	3.1	3.1	3.0	2.7	2.7	2.1	...
6	...	1.9	2.6	2.9	3.1	3.2	3.1	q2.9	3.1	3.1	2.7	2.1	...
7	...	1.9	2.5	2.8	3.0	3.2	3.1	3.2	3.1	3.1	2.7	2.1	...
8	...	1.9	2.4	2.8	3.0	3.0	3.1	3.1	3.2	2.9	2.7	2.0	...
9	...	1.9	2.6	2.9	3.1	3.1	2.9	3.1	2.9	3.0	2.7	2.0	...
10	...	1.9	2.3	2.9	3.0	q2.8	q3.0	3.1	3.1	3.1	2.7	2.2	...
11	...	1.9	2.5	2.9	3.1	3.1	3.1	q3.0	3.1	3.0	q2.5	2.1	...
12	...	2.0	2.4	2.9	3.0	3.1	3.0	3.1	q3.2	2.9	2.5	2.1	...
13	...	2.0	2.5	2.8	3.1	3.0	3.1	q3.1	3.1	3.0	2.8	2.2	...
14	...	2.0	2.1	2.9	3.0	q3.2	3.1	q3.2	3.1	3.0	2.7	2.1	...
15	...	2.2	2.5	j3.0	3.2	3.1	3.1	3.0	3.0	p2.5a	2.5	2.4	...
16	...	2.1	2.4	3.0	3.1	3.1	3.1	3.1	3.1	2.4	2.7	2.1	...
17	...	2.0	2.6	2.9	3.1	3.1	3.1	3.2	3.2	3.0	2.6	2.0	...
18	...	1.9	q2.4	2.9	3.0	3.1	3.2	3.2	3.2	3.0	2.6	...	...
19	...	2.0	q2.4	2.8	3.0	3.2	3.2	3.1	3.0	2.8	2.4	...	...
20	...	2.1	2.5	2.8	3.1	3.2	3.1	3.2	3.0	2.8	2.4	2.1	...
21	...	2.1	2.6	2.9	3.0	3.1	3.1	3.2	3.2	3.0	2.5	...	...
22	...	2.1	2.6	p2.9	3.1	3.2	3.2	3.2	p3.1a	2.9	...	...	...
23	...	2.1	2.7	3.0	3.2	3.1	3.1	3.4	3.2	3.1	...a	2.8	...
24	...	2.1	2.6	2.9	3.1	3.1	...a	...a	...a	3.1	2.7	2.2	...
25	...	2.1	2.7	3.0	3.2	...a	...a	3.2	...a	3.0	p2.5	1.9	...
26	...	2.0	2.4	3.0	3.3	3.4	3.4	3.4	3.3	3.1	2.8	2.3	...
27	...	2.0	2.6	3.0	3.1	3.2	3.2	q3.2	q3.4	3.1	2.7	2.3	...
28	...	1.9	2.7	3.0	3.2	3.4	p3.4	3.5	...a	...a	3.2	2.2	...
29	...	2.0	2.6	3.0	3.2	q3.3	3.2	3.2	3.4	3.3	2.9	2.3	...
30	...	2.4	2.9	3.2	3.3	3.3	q3.2	3.2	3.2	3.2	2.9	2.3	...
31													
MEAN*	...	2.0	2.5	2.9	3.1	3.1	3.1	3.2	3.1	3.0	2.7	2.2	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 355

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1945 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND OCTOBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	p3.4	3.3	3.4	3.6	3.5	3.4	4.0	6.3	7.4	7.6	8.8	9.1	9.5	9.6	8.3	8.0	7.7	6.8	6.8	5.8	5.3	4.9	4.6	4.2	6.0
2	4.1	3.8	3.7	3.6	3.5	3.5	4.8	6.6	6.9	7.7	8.0	8.1	8.8	8.7	8.8	8.5	8.0	7.1	6.5	6.2	5.7	5.4	5.2	4.3	6.2
3	3.9	3.8	4.0	3.8	4.0	3.9	4.9	7.1	7.8	8.0	8.2	8.3	9.2	8.8	8.6	8.0	p7.4j	p7.2j	7.2	6.4	5.3	4.7	4.7	4.5	6.2
4	4.1	4.2	4.1	3.3	3.5	3.5	4.9	6.5	7.6	8.4	8.8	9.3	8.9	8.7	8.7	8.6	8.1	7.6	7.3	6.5	5.6	5.2	5.0	4.7	6.4
5	4.5	4.4	4.1	3.3	3.2	3.1	4.9	6.3	7.4	8.2	8.6	9.0	9.9	9.6	9.8	9.6	9.0	9.0	9.0	p7.6j	7.0	6.0	5.8	5.2	6.8
6	4.7	4.7	4.3	4.0	4.1	4.1	5.1	6.4	6.8	6.7	7.1	7.6	8.1	8.5	8.1	7.5	7.2	6.9	6.5	6.1	5.8	5.5	5.4	5.2	6.1
7	5.1	4.8	4.9	4.5	4.0	4.1	5.2	6.3	7.0	7.4	8.3	8.5	8.7	8.5	8.5	8.3	7.9	p7.5c	7.2	6.2	5.5	5.4	5.5	5.3	6.4
8	4.8	4.3	3.8	3.1	2.9	3.4	4.3	6.6	6.8	7.2	9.0	9.0	8.8	8.3	8.8	8.8	8.9	8.7	8.3	6.9	5.5	5.1	5.0	5.2	6.4
9	5.1	5.0	4.5	3.4	2.5	2.9	4.8	6.6	7.7	8.5	9.1	9.2	9.7	9.0	9.0	8.5	8.5	8.6	8.2	7.7	7.0	5.4	5.4	5.3	6.7
10	5.4	5.1	4.6	3.8	4.0	4.0	5.5	6.4	6.1	6.0	6.2	6.4	6.5	6.5	6.3	6.1	6.2	p6.2c	6.1	5.7	5.4	4.8	5.1	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	8.3	8.6	8.7	9.3	9.2	9.0	9.0	8.2	8.0	7.5	7.2	6.6	6.0	5.7	5.5	...
12	4.8	4.6	4.5	4.5	4.0	4.0	5.7	6.6	7.4	8.5	9.3	9.4	9.4	9.2	9.6	9.5	9.8	10.0	9.4	8.1	7.4	6.4	6.2	5.9	7.3
13	5.7	6.5	4.0	3.3	3.4	3.5	4.3	p4.9c	5.4	5.6	6.5	8.0	8.7	8.9	8.6	8.5	8.3	8.0	7.9	6.6	6.0	5.1	4.7	4.5	6.1
14	4.3	4.2	4.2	3.6	3.4	3.5	5.0	5.9	6.9	7.8	7.9	8.6	9.1	9.0	8.9	8.3	8.0	8.3	8.3	7.4	5.7	5.4	4.8	4.7	6.4
15	4.7	4.7	4.6	4.3	4.3	4.3	5.8	6.8	7.0	8.3	8.6	9.2	9.6	9.8	9.6	9.7	9.0	8.0	8.0	6.5	6.0	5.6	5.2	5.4	6.9
16	5.1	4.9	4.6	4.4	4.6	4.4	5.5	6.2	6.9	7.3	7.6	8.0	8.4	8.2	8.6	8.1	8.4	8.3	8.3	7.2	6.6	6.2	5.3	5.3	6.6
17	5.2	p5.1a	4.8	4.0	3.6	3.4	5.4	6.8	7.7	8.7	9.2	9.9	10.1	9.9	8.9	8.3	8.1	8.5	8.6	8.3	7.1	6.2	5.3	5.0	7.0
18	5.0	5.3	4.5	3.8	3.8	3.6	4.1	4.8	5.1	5.5	6.0	7.2	8.3	8.4	8.6	8.1	8.2	7.8	7.7	7.5	6.4	5.3	4.7	4.6	6.0
19	4.5	4.5	3.8	3.2	3.1	3.3	p4.9c	6.3	6.0	6.6	6.9	7.5	8.4	8.8	8.9	9.0	9.0	p8.8c	9.0	8.0	6.5	4.8	4.5	4.3	6.3
20	4.3	4.3	4.1	3.5	3.4	3.7	5.4	6.2	6.3	6.5	6.7	...c	...c	...c	...c	7.8	7.8	7.4	7.8	7.5	6.4	5.1	4.6	4.4	...
21	4.4	4.5	4.3	4.2	4.2	4.1	5.5	7.0	6.4	7.0	8.0	8.3	8.4	8.4	8.0	8.3	8.3	8.0	8.0	8.4	7.2	5.3	4.6	4.5	6.5
22	4.5	4.4	4.5	4.3	4.3	4.4	6.2	6.7	7.0	7.0	8.3	9.2	9.6	9.7	9.9	9.4	9.2	9.5	9.4	8.5	6.4	5.4	5.3	5.4	7.0
23	5.0	5.0	4.9	4.7	4.1	3.8	5.4	6.0	7.6	8.6	10.2	10.4	10.2	9.3	9.2	8.7	8.3	8.5	8.9	8.0	6.6	5.8	5.5	4.8	7.1
24	5.1	4.9	4.5	4.5	4.2	4.0	5.4	6.2	6.6	7.3	9.1	10.3	9.9	10.7	11.1	10.0	9.4	8.6	8.4	7.8	7.4	7.1	7.9	7.5	7.4
25	5.5	5.1	4.0	3.7	3.6	3.7	5.3	5.8	6.4	6.4	6.1	8.0	9.7	10.2	8.4	7.4	7.0	6.9	6.6	7.2	6.7	6.0	5.0	5.1	6.2
26	4.3	3.8	3.5	3.2	3.2	3.2	4.0	4.5	5.4	6.0	6.8	6.8	7.4	7.4	7.5	p7.3c	7.1	7.1	7.4	7.2	6.1	5.3	5.0	5.2	5.6
27	5.0	4.7	4.3	4.0	4.0	4.0	5.6	6.8	7.1	7.5	8.6	9.5	9.6	9.1	9.2	9.2	8.3	8.3	8.8	8.6	6.7	5.5	5.3	5.2	6.9
28	5.2	4.8	4.8	4.7	4.5	4.2	5.0	5.6	5.5	5.7	7.0	6.6	8.9	8.8	8.6	7.7	7.5	7.2	6.9	7.0	6.2	5.1	p4.7f	p4.7f	6.1
29	p5.0f	5.1	p4.3f	p4.4f	3.9	3.8	4.5	4.5	5.0	5.1	5.4	5.7	5.6	6.1	5.9	6.0	5.9	5.8	5.5	5.4	5.3	5.0	4.4	4.3	5.1
30	4.2	4.0	3.9	4.0	3.6	4.0	4.9	5.7	6.2	6.9h	7.5	9.0	9.2	9.0	8.6	8.4	8.3	8.2	8.4	7.9	7.0	5.7	5.3	5.3	6.5
31	5.6	5.6	5.0	4.3	3.9	3.9	5.0	6.0	6.4	6.7	7.2	8.2	9.1	9.7	9.6	9.0	8.3	8.7	8.8	8.2	7.3	6.4	6.1	5.5	6.8
MEAN*	4.8	4.6	4.3	3.9	3.7	3.8	5.0	6.2	6.7	7.2	7.9	8.4	8.9	8.9	8.7	8.4	8.1	7.9	7.8	7.2	6.3	5.5	5.2	5.0	6.4

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 356

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1945 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS OCTOBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	p235	...a	...a	...a	270	270	260	250	280	310	275	300	290	280	280	285	260	230	225	220	240	235	...a	...a	...
2	...a	230	p250a	255	250	250	240	240	265	275	275	290	290	295	280	220	260	230	225	225	215	250	245	220	...
3	240	240	p240a	250	260	240	230	265	270	265	270	p300	270	290	280	280	260	240	230	210	215	p240a	250	260	254
4	p260a	240	225	200	255	250	245	240	240	280	275	280	285	295	295	280	270	225	230	220	220	245	250	260	253
5	p260a	250	225	230	p250a	245	235	240	275	p290	280	300	300	300	290	290	270	250	p240a	230	p220a	230	250	235	258
6	250	250	p245a	250	270	285	260	265	305	310	325	320	330	300	320	300	280	245	230	230	235	250	250	245	273
7	255	250	240	230	235	255	250	245	285	305	290	310	300	300	305	290	p285	p240c	220	210	220	260	240	250	261
8	p240a	245	p235a	235	...a	...a	240	280	300	340	290	280	290	320	320	290	295	240	225	215	225	270	310	300	...
9	290	230	210	200	p210h	240	245	240	275	300	270	300	285	290	275	280	280	220	225	235	p215a	235	260	270	253
10	245	235	220	220	p220	240	235	250	310	315	375	380	360	370	360	350	320	230	250	230	225	260	...a	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	290	290	300	300	300	285	280	270	230	235	220	230	240	250	230	...
12	240	240	240	235	225	235	220	230	230	p295	290	280	290	310	295	295	280	220	215	220	235	270	310	300	258
13	275	225	225	290	290	280	230	200	380	395	370	p330a	300	295	p290a	290	270	210	225	215	230	240	250	250	273
14	250	260	245	220	245	250	225	225	250	285	305	305	300	300	300	295	285	270	250	200	215	240	245	260	259
15	260	250	240	255	245	230	250	240	235	285	300	300	300	295	285	290	260	230	230	210	255	240	265	260	259
16	275	250	240	260	255	245	230	230	285	320	290	290	295	315	300	300	290	270	245	230	p250a	255	...a	...a	...
17	...a	...a	225	250	245	255	250	240	235	285	265	280	300	290	275	290	295	230	250	220	210	235	...a	...a	...
18	...a	300	245	270	270	270	255	210	360	400	390	335	310	305	310	290	235	240	235	225	220	235	265	270	...
19	285	255	230	260	305	280	250	230	210	315	330	300	325	305	300	290	270	260	235	205	200	p220a	260	270	266
20	280	255	240	245	260	250	235	230	270	400	340	...c	...c	...c	...c	300	p240a	230	245	215	210	225	255	280	...
21	290	270	250	260	240	240	245	230	220	320	295	315	330	310	320	310	295	285	225	225	205	215	245	275	267
22	275	270	240	240	235	220	235	225	220	285	310	p300c	p310c	p310c	p310c	p310c	p230c	p240c	p235c	p220c	p200c	p240c	p300c	p290c	260
23	p310c	p300c	p260c	p250c	p240c	p235c	p225c	p220c	p300c	295	305	280	295	295	300	300	280	230	240	225	220	245	250	p250a	265
24	290	250	285	235	250	245	215	235	220	330	310	290	330	305	300	300	265	230	245	255	300	265	260	215	268
25	220	275	230	315	310	290	285	260	295	255	365	400	350	305	305	280	230	245	270	265	250	245	300	...a	...
26	265	275	310	315	320	355	260	230	400	350	325	370	325	300	310	p320	290	235	240	220	240	240	...a	...a	...
27	...a	...a	...a	...a	260	240	235	225	280	300	310	290	295	295	300	290	225	245	240	210	220	255	...a	...a	...
28	...a	...a	...a	...a	...a	260	240	245	400	355	350	490	320	340	300	305	270	240	245	220	235	240	275	300	...
29	...a	...a	265	250	285	330	410	495	490	540	500	410	515	395	430	380	350	240	250	240	240	250	260	300	...
30	255	270	260	225	280	255	240	230	340	320	340	315	315	300	305	300	285	235	240	220	230	235	p260a	290	273
31	290	270	250	280	255	290	240	230	300	340	355	340	325	305	295	285	285	235	260	220	220	240	255	260	276
MEAN*	264	255	243	249	258	260	247	246	291	321	318	319	314	307	304	296	274	239	237	223	227	243	262	264	269

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 357

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1945 OCTOBER 1945

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.4	4.5	4.7	4.8	4.9	4.8	4.7	4.5	4.0	...	...
2	...	...	4.3	4.6	4.8	4.8	4.8	4.7	4.6	p4.7	4.0	...	...
3	...	...	4.3	4.6	4.7	4.9	4.6	4.9	4.5	4.8	3.8	...	...
4	...	...	...	4.6	4.8	4.8	4.9	4.9	4.8	4.5	4.1	...	...
5	...	...	4.7	4.8	4.8	4.9	5.1	5.0	4.7	4.6	4.0	...	...
6	...	...	4.5	4.6	4.7	4.8	4.9	4.8	...b	4.6	4.1	...	...
7	...	...	4.5	4.7	4.5	4.9	4.8	q4.8c	p4.8	4.8	q4.3	...	...
8	...	...	4.6	4.9	4.9	4.8	4.9	4.9	4.9	4.6	4.4	...	...
9	...	...	3.9	4.7	4.8	5.1	5.0	4.8	4.9	4.6	4.2	...	...
10	...	...	4.4	4.6	4.6	4.5	4.6	4.6	4.6	4.5	4.4	...	...
11	...	...	...c	4.8	4.9	4.9	4.8	5.0	4.7	4.6	4.4	...	...
12	...	...	4.6	q4.7	4.8	4.8	4.8	5.0	4.8	4.5	4.5	...	...
13	...	...	4.3	4.5	4.7	p4.6a	4.6	4.9	p4.8a	4.6	4.1	...	...
14	...	...	...	4.7	4.9	4.7	4.8	4.8	4.8	4.5	4.4	...	...
15	...	...	...	4.6	p4.8a	4.8	4.9	5.0	p4.8a	4.6	4.1	...	...
16	...	...	4.4	4.8	4.7	4.5	4.6	5.0	4.8	4.6	4.4	...	...
17	...	...	4.8	p4.8a	4.6	5.0	4.8	4.6	4.7	4.6	...	...	...
18	...	...	4.3	4.5	4.8	4.8	4.9	4.8	4.9	4.6	4.4	...	...
19	...	...	...	4.6	5.1	5.0	5.0	4.9	4.7	4.6	4.5	...	...
20	...	...	4.3	5.3	4.8	...c	...c	...c	...c	4.9	...a	...	...
21	...	...	...	5.0	4.8	4.8	5.0	5.0	5.0	4.8	4.3	...	...
22	...	...	...	4.6	5.0	q4.9c	q5.0c	q5.0c	...c	q4.7c	...	...	...
23	...	...	q4.7c	4.8	4.9	4.8	4.9	4.9	4.8	5.0	4.5	...	...
24	...	...	...	5.2	5.0	5.0	5.3	5.2	5.0	4.8	4.3	...	...
25	...	...	4.3	4.0	5.0	5.4	5.1	4.9	4.9	4.6	...	...	...
26	...	...	...	5.0	5.0	5.2	4.7	4.9	5.0	...c	3.8	...	...
27	...	...	4.4	5.4	5.0	4.8	5.1	4.8	5.2	4.5	...	...	...
28	...	...	4.6	4.9	p4.9a	4.8	4.9	4.9	4.9	4.9	...	...	...
29	3.6	4.0	4.3	4.5	4.6	4.7	4.7	4.7	4.8	4.7	4.4	...	...
30	...	...	4.8	4.8	5.0	5.0	5.3	5.0	5.0	4.8	4.6	...	...
31	...	...	4.8	5.1	5.1	5.3	5.2	5.2	5.0	4.8	4.5	...	...
* MEAN	3.6	4.0	4.5	4.8	4.8	4.9	4.9	4.9	4.8	4.7	4.3	...	...

MINIMUM VIRTUAL HEIGHT OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	230	230	225	215	225	230	215	225	225	...	...
2	...	...	220	220	215	200	205	200	200	p215	215	...	...
3	...	...	230	220	190	q200	200	200	200	q240h	215	...	...
4	...	...	...	215	210	195	q195h	230	230	220	230	...	...
5	...	...	230	q230	220	215	200	220	220	220	220	...	...
6	...	...	225	210	200	200	210	215	...b	230	230	...	...
7	...	...	230	225	205	185	210	q260h	p240a	220	q220	...	...
8	...	...	215	210	210	235	240h	210	220	235	235	...	...
9	...	...	210	215	235	210	210	215	q185h	230	220	...	...
10	...	...	220	200	205	220	245	235	220	215	220	...	...
11	...	...	...c	230	210	210	210	200	210	210	210	...	...
12	...	...	200	q220	215	195	205	210	205	200	225	...	...
13	...	...	230	205	205	...a	...a	215	p235a	220	220	...	...
14	...	...	...	230	215	215	240	230	260	220	230	...	...
15	...	...	...	215	p200a	190	200	...a	...a	210	...a	...	...
16	...	...	210	215	200	200	205	200	220	215	220	...	...
17	...	...	...	230	p225a	200	215	240	215	240	235	...	...
18	...	...	220	205	240	220	220	195	225	230	215	...	...
19	...	...	...	210	210	215	250	230	225	230	230	...	...
20	...	...	210	230	225	...c	...c	...c	...c	220	...a	...	...
21	...	...	...	200	215	205	205	215	220	225	230	...	...
22	...	...	...	220	205	q195c	q210c	q250c	q220c	q215c	...	...	...
23	...	...	q230c	215	200	210	195	230	q240	225	220	...	...
24	...	...	...	230	230	215	200	195	230	225	235	...	...
25	...	...	215	200h	210	205h	235	205	220	210	...	...	...
26	...	...	...	230	230	195	200	205	...a	...c	240	...	...
27	...	...	215	220	200	240	235	210	265	225	...	...	...
28	...	...	...a	...a	...a	...a	...a	...a	...a	230	...	...	...
29	255	230	215	215	200	...a	230	210	210	235	230	...	...
30	...	...	225	...a	230	...a	...a	...a	210	225	230	...	...
31	...	...	215	200	...a	190	240	235	225	205	225	...	...
* MEAN	255	230	220	217	213	207	216	218	222	222	225	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 358

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

OCTOBER 1945 OCTOBER 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	1.0	...c	0.9	1.1	1.0	1.7	0.9	0.8	0.7	0.8	...
2	...	0.6	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.6	0.6	...
3	...	0.5	0.8	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.8	...e	...
4	...	0.7	0.7	0.6	0.9	0.8	0.8	q1.3	0.9	0.9	0.8	0.6	...
5	...	0.7	0.8	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.7	0.7	...
6	...	0.6	0.8	0.8	0.9	0.9	0.9	0.9	...b	0.9	0.7	0.7	...
7	...	0.6	0.6	0.8	0.9	0.9	1.0	q0.9c	0.9	0.9	q0.6	...c	...
8	...	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.6	...e	...
9	...	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.7	0.6	0.7	...
10	...	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	...
11	...	...c	...c	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	...
12	...	0.6	...e	q0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.7	...
13	...	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.6	...
14	...	0.7	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.8	...
15	...	0.6	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.6	...
16	...	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	...
17	...	0.6	0.8	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	...
18	...	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.8	0.6	...
19	...	0.6	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.7	...
20	...	0.8	0.9	0.9	0.9	...c	...c	...c	...c	0.9	0.8	...	...
21	...	0.6	0.7	0.9	0.9	0.9	0.8	0.9	0.9	0.8	0.8	0.7	...
22	...	0.8	1.0	1.0	1.0	...c	...c	...c	...c	q0.9c	0.9	q0.8c	...
23	...	0.8	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.6	...
24	...	0.6	0.8	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	...
25	...	0.6	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	...
26	...	0.6	1.0	0.9	0.9	0.9	1.0	1.0	1.0	p0.9c	0.9	0.9	...
27	...	0.6	0.9	0.8	0.9	1.0	0.9	1.1	1.0	1.0	0.9	0.7	...
28	...	0.8	0.8	1.0	1.0	0.9	1.1	0.9	1.0	1.0	0.9	0.8	...
29	...	0.7	0.9	0.9	1.0	1.0	1.0	0.9	0.9	1.1	0.8	0.7	...
30	...	0.8	0.9	0.9	0.9	2.2	0.9	0.9	0.9	0.9	0.9	0.7	...
31	...	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	...
* MEAN	...	0.7	0.8	0.9	0.9	1.0	0.9	1.0	0.9	0.9	0.8	0.7	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	q2.2	q2.7	3.1	3.2	3.2	3.1	3.4	3.2	p2.8a	2.2	2.3	...
2	...	2.3	2.8	3.1	3.2	3.2	3.2	3.2	3.2	...a	...a	2.3	...
3	...	2.4	2.7	3.0	3.2	3.2	3.4	3.4	p3.3	3.2	2.8	q2.2a	...
4	...	2.3	2.8	3.1	3.2	3.2	3.2	3.2	p3.3	3.3	2.8	...a	...
5	...	2.4	2.9	q3.3	...a	...a	3.2	...a	...h	...a	2.9	...a	...
6	...	2.4	2.9	3.2	3.2	3.5	3.5	3.5	...b	3.3	3.0	2.4	...
7	...	2.1	2.9	3.2	3.0	3.2	...a	...a	...a	3.1	q3.0	...c	...
8	...	2.5	2.9	3.2	3.4	3.5	3.5	3.5	3.4	3.2	2.9	...a	...
9	...	2.4	2.9	3.2	3.4	3.5	3.5	3.6	3.5	3.3	3.0	2.4	...
10	...	2.5	2.9	3.1	3.4	...c	...a	3.6	3.4	3.2	3.0	2.3	...
11	...	2.5	3.0	3.2	3.2	p3.2	3.2	3.2	3.1	p3.1	q3.0	...a	...
12	...	2.5	3.1	q3.1	3.3	3.1	3.2	...a	...a	...a	2.9	3.2	...
13	...	2.4	2.9	3.1	q3.3a	...a	...a	...a	...a	3.1	2.9	3.2	...
14	...	2.4	2.9	3.1	3.2	3.2	3.2	3.2	3.2	3.2	2.9	2.3	...
15	...	2.4	2.9	3.2	p3.3a	3.2	3.4	...a	...a	3.1	...a	...a	...
16	...	2.3	2.9	3.2	3.2	3.4	3.5	3.6	3.4	3.3	2.9	3.2	...
17	...	2.4	3.0	3.2	3.2	3.2	3.7	3.5	3.4	3.3	3.0	...a	...
18	...	2.4	2.9	3.2	3.3	3.3	p3.3a	2.9	3.0	...a	...a	...a	...
19	...	2.4	3.0	3.3	3.2	...a	...a	...a	3.4	3.2	2.9	2.5	...
20	...	2.5	3.0	3.2	3.5	...c	...c	...c	...c	3.2	...a	...	...
21	...	2.3	2.8	3.2	3.2	3.2	3.5	3.6	3.2	3.3	3.0	...a	...
22	...	2.4	3.0	3.1	3.2	q3.2c	p3.4c	q3.3c	q3.3c	q3.1c	2.9	...a	...
23	...	2.4	3.0	3.2	3.4	3.2	3.5	3.2	3.2	p3.2a	3.0	...a	...
24	...	2.5	3.0	3.2	3.2	3.5	3.3	...a	3.6	...a	...a	2.4	...
25	...	2.3	2.9	3.1	3.5	3.3	...a	...a	3.4	3.3	...a	2.4	...
26	...	2.6	3.1	3.4	3.5	3.7	...a	...a	3.5	p3.3c	3.1	2.6	...
27	...	2.6	3.0	3.2	3.5	3.3	3.2	3.1	3.5	3.2	3.1	2.6	...
28	...	2.6	3.1	3.5	3.2	3.2	3.1	3.5	3.2	3.2	3.1	2.6	...
29	...	2.7	3.0	3.2	3.3	3.2	3.2	3.6	3.5	3.4	3.0	2.4	...
30	...	2.6	3.1	3.3	3.5	...a	...a	3.2	...a	...a	3.0	3.0	...
31	...	2.8	3.2	3.1	3.1	3.1	...a	3.5	3.4	3.2	3.1	2.5	...
* MEAN	...	2.4	2.9	3.2	3.3	3.3	3.3	3.4	3.3	3.2	2.9	2.6	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 359

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1945 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — NOVEMBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.2	4.9	4.9	4.7	4.6	5.0	6.7	6.7	6.7	7.4	8.2	9.2	9.4	10.2	9.6	9.6	9.2	8.8	9.5	8.8	7.2	5.9	5.3	5.2	7.2
2	5.1	5.2	5.0	4.6	4.3	4.3	5.7	6.2	6.7	7.7	8.7	9.5	10.2	10.3	9.7	9.8	9.3	8.6	7.8	7.4	6.7	6.0	5.7	5.5	7.1
3	5.5	5.3	5.2	4.9	4.4	4.5	6.0	6.4	6.8	6.8	7.8	9.2	10.2	10.5	9.7	9.2	8.8	8.7	8.3	7.8	7.0	6.1	5.8	5.8	7.1
4	5.9	5.6	5.4	4.8	4.4	4.3	5.4	6.7	7.8	8.0	8.2	9.4	9.8	10.2	9.9	9.3	9.0	8.7	8.8	8.8	7.4	6.0	5.5	5.5	7.3
5	5.2	5.2	5.3	5.0	4.0	4.2	5.4	6.2	7.2	7.5	7.7	9.6	10.2	10.5	9.6	8.8	7.4	7.0	7.4	7.5	7.0	6.9	6.3	5.9	7.0
6	5.3	5.1	4.4	4.3	4.1	4.5	5.8	6.2	6.5	6.9	7.8	8.0	8.5	9.0	8.7	8.5	8.6	9.0	8.9	7.9	6.9	6.0	5.5	5.5	6.8
7	5.5	5.5	5.2	4.3	4.1	4.4	5.8	6.6	7.6	8.0	7.9	8.6	9.8	10.4	10.5	10.0	9.4	9.3	8.9	8.7	7.6	6.3	5.5	5.3	7.3
8	5.1	4.8	5.0	4.9	4.6	4.9	6.0	6.6	6.8	7.1	8.3	9.4	9.9	10.1	9.8	10.0	10.0	9.3	9.0	8.3	7.2	6.3	5.6	5.3	7.3
9	5.2	5.1	5.2	5.0	4.8	4.8	5.5	6.6	6.5	7.5	8.1	8.7	9.2	10.2	9.3	8.4	8.1	8.1	7.7	7.8	7.4	p7.0	p5.8c	5.9	7.0
10	5.5	5.0	4.7	4.4	4.3	3.7	4.4	5.3	6.4	7.3	8.0	9.0	9.5	10.0	9.6	9.2	8.4	8.6	8.6	9.0	6.9	5.7	4.9	4.5	6.8
11	4.3	4.6	4.4	4.4	4.3	4.3	5.2	5.4	5.5	6.3	6.6	p8.1	9.0	9.3	9.3	9.5	9.4	9.0	8.9	8.6	6.6	5.5	5.3	5.1	6.6
12	5.2	4.7	4.3	3.6	3.4	3.6	4.1	4.7	4.9	5.3	5.5	6.1	7.1	8.6	7.5	8.0	8.6	8.2	8.0	8.0	7.2	6.4	5.8	5.5	6.0
13	5.3	4.8	4.3	4.5	4.7	5.0	5.5	5.5	6.0	5.9	6.0	6.3	6.4	6.6	6.7	6.6	6.8	6.7	6.5	6.4	6.1	5.7	5.5	5.4	5.8
14	5.2	4.9	4.7	4.5	4.6	4.2	5.0	5.9	p6.4c	6.6	6.8	7.4	8.0	8.5	8.7	9.2	9.0	8.6	8.0	6.9	6.3	5.9	5.7	5.8	6.5
15	5.8	5.8	4.8	4.3	4.3	4.6	5.6	6.5	7.0	...c	...c	...c	...c	9.4	9.9	9.3	8.6	8.4	8.0	7.5	6.6	6.1	6.0	5.9	...
16	5.9	5.6	4.6	4.1	4.0	4.1	5.7	6.3	6.6	6.4	6.4	7.0	7.1	7.1	6.8	6.9	6.8	7.0	7.5	7.5	6.4	6.2	6.1	6.0	6.2
17	5.8	5.5	4.9	4.9	4.8	4.4	5.5	5.4	5.5	6.0	7.0	7.5	8.3	7.8	7.2	7.3	7.2	7.5	7.2	7.6	7.0	6.4	6.2	6.2	6.4
18	6.0	5.8	5.5	5.4	4.6	4.4	4.9	5.8	7.0	7.5	8.3	9.5	9.9	9.8	10.0	9.8	9.2	8.5	8.5	p8.5j	8.0	7.2	6.7	6.4	7.4
19	6.3	6.0	5.7	5.4	5.2	5.2	6.5	7.9	8.7	9.4	10.1	10.8	11.2	11.3	11.5	10.3	10.8	10.6	9.8	8.4	7.3	6.9	6.6	6.7	8.3
20	6.7	6.6	5.7	4.2	3.8	4.4	5.9	6.4	5.9	6.3	7.3	p8.0	9.0	9.4	9.4	9.2	8.8	8.7	p8.3j	8.0	7.4	6.9	6.5	6.5	7.0
21	6.6	6.0	5.4	4.6	4.3	4.6	5.7	6.4	7.4	8.0	9.0	9.3	9.8	10.0	10.1	10.2	10.3	10.2	10.6	10.2	9.0	8.1	7.4	6.8	7.9
22	6.9	6.8	6.4	6.2	6.2	6.1	6.0	6.9	7.4	9.1	9.7	9.6	10.0	10.7	10.4	9.9	9.5	9.6	9.8	9.4	8.0	7.1	7.0	6.9	8.2
23	6.9	7.0	6.4	6.7	6.0	6.0	6.0	6.2	6.7	7.2	8.4	9.6	10.0	9.9	9.3	8.8	8.7	8.3	8.5	8.7	8.2	p7.4j	7.0	6.7	7.7
24	7.3	6.7	6.2	5.9	5.6	6.4	6.8	7.1	7.7	8.3	9.3	10.0	9.9	10.1	9.8	9.6	9.5	8.7	8.7	9.0	8.0	p7.4j	7.1	7.1	8.0
25	p7.4j	p7.5j	6.7	6.0	5.5	5.4	5.6	5.8	6.3	6.8	7.4	8.2	9.1	9.0	9.2	8.8	8.8	9.0	8.9	8.6	8.0	7.4	6.9	6.7	7.9
26	6.9	6.9	6.3	6.5	6.3	6.0	5.7	6.3	6.7	7.5	7.2	7.5	8.1	8.5	8.9	8.8	8.9	8.8	8.5	8.3	8.0	7.2	7.0	6.7	7.4
27	6.6	7.0	6.4	5.5	5.2	5.0	5.7	6.4	7.0	7.5	7.3	8.3	8.9	8.7	8.9	9.3	9.1	9.1	8.8	8.7	8.1	7.3	6.5	6.7	7.4
28	6.7	6.1	5.5	5.3	4.7	5.5	6.4	6.4	6.9	7.1	7.4	7.4	8.0	8.5	8.9	9.0	8.5	8.4	8.1	7.9	7.5	7.4	7.0	6.7	7.1
29	6.6	6.0	5.5	5.5	5.0	5.5	6.1	6.7	7.3	7.6	8.3	8.3	9.0	10.0	10.0	10.3	10.0	10.8	9.9	9.5	8.1	6.8	6.0	6.0	7.7
30	6.7	6.1	5.6	5.3	4.6	4.4	5.2	5.7	5.5	6.0	6.3	7.2	7.4	7.8	8.5	8.5	8.3	8.4	8.2	8.0	6.8	6.0	5.4	5.8	6.6
31																									
MEAN*	6.0	5.7	5.3	5.0	4.7	4.8	5.7	6.2	6.7	7.2	7.8	8.5	9.1	9.4	9.2	9.1	8.8	8.7	8.5	8.3	7.3	6.6	6.1	6.0	7.1

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 360

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1945 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — NOVEMBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	280	265	280	285	255	245	230	225	225	340	340	335	330	300	320	300	280	260	245	230	220	235	270	280	274
2	280	270	245	260	p240a	245	235	220	330	320	315	320	310	300	300	290	280	255	240	240	230	245	275	270	271
3	...a	...a	250	250	240	270	235	220	270	300	335	330	320	300	290	300	280	270	245	230	235	240	280	280	...
4	260	245	235	230	230	245	230	290	270	305	320	310	310	315	300	290	285	245	250	220	220	220	270	275	265
5	...a	...a	255	230	230	260	230	p220h	300	315	380	355	315	300	290	250	265	255	255	250	250	p235a	245	245	...
6	265	250	245	260	250	265	240	225	290	330	325	340	325	320	300	310	295	245	250	220	215	230	255	280	272
7	p275a	240	220	p235a	230	240	230	230	275	280	300	325	320	300	295	280	275	225	240	230	215	220	240	255	257
8	250	...a	...a	...a	230	p225a	235	235	300	300	320	330	320	290	300	300	275	220	245	220	220	240	p255a	280	266
9	300	290	p260a	250	p230a	240	230	230	300	p330	245	370	380	320	325	335	340	240	260	240	275	230	...c	...a	...
10	275	280	270	270	245	250	250	230	325	305	355	325	320	325	290	300	275	280	260	235	215	230	240	275	276
11	...a	...a	...a	...a	...a	250	240	350	400	335	380	370	330	p320a	320	315	280	275	250	235	235	260	290	285	...
12	...a	...a	...a	...a	310	290	245	...	...a	410	470	450	380	310	300	340	280	...a	...a	...a	230	250	p270a	p270a	...
13	255	...a	...a	...a	250	270	230	235	350	390	p400	p400	415	400	375	400	345	240	250	245	245	275	275	280	...
14	270	...a	...a	...a	p250a	250	p270a	355	p385c	345	340	380	350	335	335	320	290	260	250	230	230	270	275	270	...
15	260	235	235	255	250	245	220	260	310	...c	...c	...c	...c	330	320	300	290	230	250	220	240	270	270	280	...
16	260	210	245	290	...a	...a	245	230	330	370	450	380	395	350	390	350	340	330	p300a	240	220	270	270	270	...
17	250	240	270	280	280	290	285	400	465	450	390	350	325	355	340	350	340	300	270	240	230	270	270	...a	...
18	...a	240	270	...a	...a	275	250	350	325	360	325	p320	290	p330a	320	280	290	230	250	250	240	240	260	260	...
19	p255a	235	240	p240a	260	240	235	260	280	290	325	315	310	330	300	300	280	270	240	220	235	260	280	275	270
20	p285	240	220	210	255	260	235	295	340	425	360	350	330	340	330	310	315	225	260	230	250	260	325	270	288
21	p275a	235	...a	...a	p250a	220	220	210	300	315	320	300	330	320	330	p325a	300	245	265	230	225	240	p280a	245	...
22	270	p260	235	250	240	235	230	225	p295a	320	300	330	330	320	325	305	310	285	260	240	p240a	250	265	270	275
23	...a	...a	...a	...a	230	225	220	240	310	350	350	310	320	320	320	325	300	290	p280a	p240a	245	245	...a	...a	...
24	250	250	...a	...a	...a	250	240	230	290	335	310	320	320	290	325	300	300	235	270	240	240	p235	275	320	...
25	275	240	230	250	240	250	235	225	345	360	350	360	330	320	340	325	310	290	p285a	240	240	245	p280a	...a	...
26	...a	275	p270a	265	235	230	230	230	315	320	360	370	355	340	330	325	315	240	260	260	255	260	p280a	295	...
27	300	260	...a	...a	...a	245	240	310	310	320	350	340	320	320	330	320	315	285	250	235	245	p250a	250	...a	...
28	...a	...a	265	245	265	260	p230	230	300	335	350	365	345	345	325	320	300	250	245	240	235	255	250	250	...
29	...a	260	...a	280	265	245	320	230	310	320	315	350	p345	330	330	325	300	275	260	p260a	255	p255a	245	320	...
30	...a	225	245	250	250	260	230	325	430	375	430	355	350	350	325	315	300	270	250	230	220	250	...a	...a	...
31																									
MEAN*	270	250	249	254	248	251	240	259	320	340	349	347	335	324	321	314	298	259	256	236	235	248	268	275	281

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 361

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	5.1	q5.1	5.3	5.2	5.1	5.0	q4.8h	4.4	3.8	...
2	...	...	4.8	4.9	5.1	5.2	5.2	q5.2	5.0	4.7	4.3	3.5	...
3	...	...	4.4	4.8	5.0	5.0	5.1	5.0	5.0	4.8	4.3	3.8	...
4	...	4.3	4.5	4.9	5.3	5.0	4.9	5.3	4.9	4.7	4.3	...	...
5	...	...	4.6	4.7	5.0	4.9	4.9	4.8	4.7	4.6	4.1	...	...
6	...	...	4.4	4.8	4.9	5.1	5.0	4.8	4.9	4.8	4.3	...	...
7	...	...	4.5	4.7	4.8	4.6	5.0	5.0	4.8	4.7	4.4	...	...
8	...	...	4.7	4.7	4.9	5.1	5.0	4.9	4.9	4.7	4.4	...	...
9	...	...	4.5	p5.0	4.7	5.0	4.9	4.8	4.7	4.6	4.4	...	...
10	...	...	4.5	4.4	4.7	4.9	...a	...a	4.9	4.8	4.1	...	...
11	...	4.1	4.4	4.6	4.8	4.9	5.0	p4.9a	4.8	4.7	4.4	...	...
12	...	4.3	...a	4.5	4.6	4.9	4.9	...a	...a	...a	...a	...	...
13	...	...	4.6	q4.7	4.7	4.8	4.9	4.8	4.8	4.8	4.4	...	...
14	...	4.4	...c	4.8	4.8	5.1	5.0	5.0	...h	4.7	4.4	3.7	...
15	...	3.7	4.8	...c	...c	...c	...c	5.2	4.9	4.9	4.6	...	...
16	...	...	4.7	4.9	p4.9a	4.9	...a	...a	4.9	4.8	4.6	4.2	...
17	...	4.3	4.6	4.7	4.9	5.0	p5.0a	5.0	5.0	5.3	4.8	4.2	...
18	...	4.5	5.0	5.4	5.2	5.3	5.1	p5.2a	5.4	p5.0h	4.8	...	...
19	...	4.4	5.0	...a	...a	5.2	5.3	5.3	5.2	5.0	4.5	4.1	...
20	...	4.4	4.7	4.9	p5.0a	5.1	5.1	5.0	5.1	4.9	4.7	...	...
21	...	...	4.8	5.1	5.2	5.0	5.2	5.1	5.1	p5.0a	4.8	...	...
22	...	...	...a	...a	5.1	5.5	5.5	5.2	5.1	5.0	...a	4.1	...
23	...	...	4.8	5.1	5.2	5.0	5.2	4.9	5.0	5.0	4.7	...a	...
24	...	...	4.8	5.4	p5.3a	5.2	5.3	5.2	5.2	4.9	4.6	...	...
25	...	...	4.6	5.0	5.1	5.3	5.2	p5.1a	5.1	5.0	4.6	4.2	...
26	...	...	4.7	5.0	4.9	5.1	5.0	5.0	p5.0a	4.9	...a	...	...
27	...	4.4	4.8	5.0	q5.5h	5.2	5.0	5.1	p4.9a	4.8	4.7	4.1	...
28	...	...	4.5	4.7	4.9	5.1	5.0	5.2	4.8	4.8	4.6	...	...
29	...	...	4.7	5.0	5.0	5.4	5.3	5.0	...a	...a	...a	...	...
30	...	4.2	4.6	4.7	4.8	4.9	5.0	5.0	4.9	4.7	4.5	4.1	...
31													
MEAN*	...	4.3	4.6	4.9	5.0	5.1	5.1	5.0	5.0	4.8	4.5	4.0	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	220	205	200	230	215	200	...h	...a	230	...
2	...	...	210	210	230	q250h	210	230	220	220	225	230	...
3	...	...	q240h	225	210	200	235	220	...a	...a	220	230	...
4	...	215	...	220	p225a	200	p215a	200	220	220	220	...	...
5	...	...	220	200	q230h	220	220	210	230	p230c	220	...	...
6	...	...	...a	...a	q250h	q250h	...a	240	p230a	230	245	...	...
7	...	...	220	200	215	200	200	200	205	220	215	...	...
8	...	...	225	215	...a	...a	210	...a	220	220	...h	...	...
9	...	...	220	235	220	...a	240	240	220	240	235	...	...
10	...	...	q200h	250	230	...a	...a	...a	245	220	225	...	...
11	...	230	215	200	210	235	...a	...a	220	240	240	...	...
12	...	...	...a	...a	...a	...a	220	...a	...a	...a	...a	...	...
13	...	...	215	q210	q210	...a	210	200	q260	235	220	...	...
14	...	230	...c	225	205	p210a	220	220	...h	q245h	q250h	230	...
15	...	200	225	...c	...c	...c	...c	210	230	210	220	...	...
16	...	...	240	...a	...a	...a	...a	...a	230	225	230	240	...
17	...	210	220	230	230	200	p210c	220	...a	...a	q230	235	...
18	...	240	240	...a	...a	q215	...a	...a	250	p230h	220	...	...
19	...	220	210	...a	...a	200	210	200	220	p220a	220	215	...
20	...	230	220	...a	...a	...a	220	...a	...a	230	225	...	...
21	...	...	q250h	200	230	200	210	220	...a	...a	...a	...	...
22	...	...	...a	...a	220	220	...a	...a	230	230	...a	240	...
23	...	...	240	...a	220	210	195	220	230	220	...a	...a	...
24	...	...	240	...a	...a	...a	...a	...a	...a	230	225	...	...
25	...	...	210	...a	200	210	230	p230a	230	240	240	...a	...
26	...	...	225	260	200	p220a	240	...a	...a	...a	...a	...	...
27	...	230	230	260	p220a	225	235	220	...a	...a	235	235	...
28	...	...	215	215	210	220	230	p230a	235	q260h	225	...	...
29	...	...	200	q200h	200	310	...a	265	...a	...a	...a	...	...
30	...	220	220	200	200	p225a	250	235	230	250	235	235	...
31													
MEAN*	...	222	223	220	217	220	221	221	228	230	228	232	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 362

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

NOVEMBER 1945 NOVEMBER 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.6
2	...e	0.7	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.7	0.6	...e
3	0.6	0.6	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.5
4	...e	0.6	0.6	0.9	0.9	0.8	0.9	0.9	0.9	0.8	0.7	0.6	...e
5	0.6	0.6	1.0	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6
6	0.7	0.7	0.7	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.6
7	0.6	0.6	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	...e
8	0.6	0.7	0.7	0.8	1.0	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.6
9	0.6	0.6	0.9	0.8	0.8	0.9	0.9	0.9	0.7	0.7	0.6	0.7	...e
10	...e	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.6	0.7
11	0.7	0.7	0.6	0.8	0.9	0.9	0.9	0.9	1.0	0.8	0.8	0.6	...e
12	0.6	0.6	0.8	0.8	0.9	0.9	...c	...c	...c	...c	0.8	0.6	0.5
13	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.7	0.7	0.6
14	0.6	0.7	p0.9c	0.9	0.9	1.1	1.1	0.9	0.9	0.9	0.7	0.6	...e
15	0.7	0.8	0.9	...c	...c	...c	...c	0.9	0.9	0.8	0.7	0.6	0.6
16	0.6	0.8	1.0	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.7	0.7	...e
17	0.6	0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.6
18	0.6	0.7	0.7	0.8	0.9	0.9	0.7	0.9	0.9	0.9	0.8	0.8	...c
19	...c	...e	1.0	0.8	0.8	0.9	0.8	0.9	0.8	0.7	0.6	0.6	0.6
20	0.6	0.7	0.7	0.8	0.8	1.0	0.9	0.9	0.8	0.8	0.7	...c	...c
21	0.7	0.7	0.7	0.9	0.8	0.9	0.9	0.9	0.9	0.8	p0.7c	0.6	...e
22	0.6	0.6	0.6	0.9	0.9	0.9	0.9	1.1	0.9	1.0	0.8	0.7	...e
23	0.6	0.6	0.9	0.8	0.7	0.7	0.9	0.9	0.8	0.9	0.7	0.7	0.6
24	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	...e
25	...e	0.6	q0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.7	0.7	...e
26	0.6	0.6	1.1	0.7	0.8	0.8	0.9	0.9	0.8	0.9	0.7	0.6	...e
27	0.6	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.7	0.8	0.7	0.6	0.6
28	0.6	...e	0.6	0.6	0.8	0.8	0.8	0.9	0.8	0.9	0.9	0.7	0.7
29	0.6	0.7	1.0	0.7	0.7	0.9	0.9	0.9	0.8	0.9	0.8	0.7	0.6
30	...e	0.6	0.7	0.8	0.9	0.8	0.8	0.9	0.9	...c	...c	0.7	0.6
31													
* MEAN	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.7	3.2	3.6	3.5	3.6	3.5	3.5	3.5	3.2	2.8	...a	...a
2	2.2	2.6	3.0	3.3	3.5	3.5	3.7	3.6	3.5	3.3	3.0	2.6	...a
3	2.0	2.5	3.1	3.3	3.5	3.7	3.7	3.6	3.6	3.3	3.0	2.3	1.7
4	1.9	2.5	2.9	3.0	3.2	p3.4a	q3.5	3.6	3.5	3.3	2.9	2.5	1.7
5	2.0	2.6	3.1	q3.4	3.5	3.6	3.6	3.6	3.5'	p3.2c	2.8	...a	...a
6	2.1	2.7	3.1	3.3	3.5	3.6	3.7	3.5	3.4	3.2	p2.8a	2.2	...a
7	2.0	2.6	3.2	3.3	3.5	3.6	3.6	3.6	3.5	3.3	3.0	2.5	1.7
8	...a	...a	3.0	3.3	p3.4a	q3.5a	3.6	3.6	3.5	3.3	3.0	2.5	1.8
9	1.9	2.7	3.1	3.3	3.4	3.5	3.5	3.5	3.4	3.3	3.0	2.5	1.8
10	1.9	2.5	3.0	3.2	3.4	3.4	q3.5a	3.4	3.4	3.3	3.0	2.6	...a
11	2.1	p2.6a	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.0	2.5	1.8
12	2.1	2.7	3.1	3.3	3.5	3.5	3.5	3.6	3.5	3.4	3.1	2.6	...a
13	2.1	2.7	3.1	3.3	q3.4	q3.5	3.5	3.6	3.7	3.3	3.1	2.7	...a
14	...a	2.7	p3.1c	3.3	3.5	3.7	3.7	3.6	3.5	3.3	3.0	2.6	1.8
15	2.1	2.7	3.1	...c	...c	...c	...c	3.6	3.6	3.4	3.1	2.6	1.8
16	2.1	2.8	3.1	3.3	3.5	3.6	3.7	3.6	3.5	p3.4a	3.2	...a	...a
17	2.2	2.8	3.1	3.4	3.5	q3.6	3.6	3.7	3.6	3.4	3.1	2.6	1.9
18	...a	2.7	3.1	3.4	p3.5a	3.6	3.6	3.5	3.5	3.4	3.1	2.7	1.9
19	2.3	2.9	3.1	3.4	p3.5a	3.6	3.7	3.7	3.6	3.3	3.1	2.5	...a
20	2.2	2.8	3.1	3.4	3.5	3.6	3.6	3.7	3.6	3.4	3.1	2.6	...a
21	2.4	2.8	3.1	3.4	3.6	3.6	3.7	3.6	3.6	3.4	p3.1a	2.6	...a
22	2.3	2.8	3.1	3.4	3.6	3.8	3.7	3.7	3.7	3.5	3.2	2.8	2.0
23	2.1	2.8	3.2	3.5	...a	...a	...a	3.7	3.6	3.5	3.2	2.8	...a
24	2.3	2.8	3.1	3.3	3.5	3.6	3.7	3.6	3.5	q3.3	3.2	2.8	...a
25	2.3	2.8	3.1	3.5	3.6	3.8	p3.8a	3.7	3.7	3.5	3.3	2.8	...a
26	2.3	2.8	3.2	3.3	3.5	3.6	3.7	3.7	3.6	3.4	3.1	2.8	2.1
27	2.2	2.9	3.2	3.4	3.6	3.7	3.7	3.7	3.6	3.3	3.0	2.7	2.1
28	...c	2.8	3.1	3.0	q3.4	3.5	3.6	3.6	3.5	3.4	3.1	2.7	2.0
29	2.2	2.7	3.3	3.4	3.6	3.6	3.7	3.6	3.6	3.4	3.1	2.7	1.9
30	2.2	2.6	p3.3a	3.5	3.5	3.6	3.6	3.7	3.7	3.5	3.2	2.7	1.9
31													
* MEAN	2.1	2.7	3.1	3.3	3.5	3.6	3.6	3.6	3.6	3.4	3.1	2.6	1.9

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 363

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1945 — DECEMBER 1945

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	6.1	6.2	5.1	4.3	4.0	4.2	5.3	5.9	6.1	7.1	8.1	...c	...c	9.9	10.3	9.8	9.5	8.8	8.2	8.0	7.3	6.7	6.8	6.6	...
2	6.6	6.7	6.1	4.9	4.2	4.4	6.2	6.6	7.5	8.2	8.7	9.4	9.6	9.9	10.2	9.9	9.5	9.0	8.5	8.3	7.6	6.7	6.6	6.8	7.6
3	6.7	6.4	5.6	4.8	4.3	4.6	6.0	6.7	7.1	7.7	7.8	8.7	9.4	9.4	9.1	8.8	8.6	9.0	8.7	8.4	7.4	7.0	6.8	6.6	7.3
4	6.9	7.4	5.9	5.0	5.0	5.4	6.0	6.3	6.5	6.6	7.2	8.2	8.8	8.8	8.8	8.8	8.8	8.3	8.2	7.4	6.7	6.8	6.5	6.4	7.1
5	6.2	5.5	5.0	4.6	4.5	4.6	5.5	6.2	7.3	7.8	8.3	8.8	8.7	8.7	8.9	8.9	9.2	9.1	7.9	7.6	6.7	6.2	6.5	6.9	7.1
6	6.8	6.5	5.9	5.0	3.9	4.2	5.6	6.4	7.2	8.3	9.3	9.8	9.6	9.4	8.8	8.8	8.8	9.2	9.6	9.2	7.8	p6.0a	6.8	7.0	7.5
7	6.8	6.5	5.9	4.3	3.7	3.8	4.8	5.5	6.5	7.5	8.4	8.8	9.0	9.3	9.1	8.6	8.6	8.3	8.5	8.3	7.8	6.7	6.2	5.5	7.0
8	5.2	5.5	5.2	5.0	5.1	4.8	6.2	6.6	6.8	7.8	9.3	10.3	10.1	9.8	8.5	8.2	8.2	8.4	7.4	7.5	7.3	6.8	5.5	5.2	7.1
9	5.6	5.9	4.2	4.2	3.8	4.2	5.0	5.9	6.0	5.8	5.8	6.6	6.8	7.9	7.8	7.4	6.8	6.8	6.8	6.7	6.6	6.4	6.2	5.9	6.0
10	6.0	5.4	4.8	4.4	4.0	4.4	5.3	6.0	6.5	7.6	7.1	7.2	7.0	7.1	6.9	6.9	6.9	6.8	7.3	7.0	7.1	6.8	6.2	6.2	6.3
11	6.0	6.0	5.5	5.0	4.9	5.1	5.9	6.3	7.0	8.2	8.9	8.9	9.3	10.2	9.7	9.8	9.2	8.0	8.8	8.9	p8.6j	7.3	6.6	6.2	7.5
12	5.9	5.6	5.9	5.2	4.7	4.8	5.5	6.0	6.6	7.0	7.2	7.5	8.0	8.6	9.0	8.8	8.7	8.6	8.3	7.5	7.4	6.8	6.8	6.8	7.0
13	6.7	6.6	5.9	5.2	4.7	4.7	5.8	6.5	6.8	7.5	7.9	8.3	8.5	9.3	9.6	9.0	8.3	7.8	7.1	7.2	7.4	6.8	6.8	6.6	7.1
14	7.6	6.6	5.2	4.7	3.9	3.4	4.0	p4.0f	4.3k	5.0k	5.5k	6.1k	5.5k	5.7k	5.8k	6.0k	5.6k	5.3k	5.8k	6.0k	6.9k	8.0k	6.0k	6.2k	5.6
15	6.6k	5.0k	3.9k	2.2k	2.0k	3.6k	4.8k	5.3k	4.5k	4.9k	4.9k	5.2k	5.0k	5.1k	5.3k	5.6k	5.5k	5.6k	5.6k	5.3k	5.0k	4.8k	4.9k	4.9k	4.8
16	5.1	4.4	3.8	3.3	3.1	3.7	5.3	6.3	6.5	7.2	7.8	8.4	8.7	8.6	8.4	8.3	7.8	7.8	7.6j	7.6	7.0	6.3	6.2	6.1	6.5
17	6.5	6.0	5.1	4.7	4.2	4.5	5.9	6.8	7.8	8.8	9.4	9.5	10.3	10.4	10.3	10.1	9.6	8.4	8.0	8.1	7.2	6.9	6.5	6.7	7.6
18	6.6	6.4	5.9	4.8	4.0	4.2	5.6	6.0	6.9	7.8	9.0	9.0	8.5	8.3	8.5	8.6	9.2	8.9	8.7	8.5	7.8	7.2	6.5	5.6	7.2
19	7.1	7.0	5.8	4.8	p4.4f	4.6	5.4	5.6	6.0	7.2	7.3	7.6	8.2	8.3	7.9	7.6	7.5	7.6	7.6	7.6	8.0	7.5	7.4	7.8	6.9
20	7.6	6.6	6.0	4.9	4.4	4.5	5.3	6.0	5.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	p4.5	p5.7c	6.8	7.2	6.7	6.8	6.3	6.0	5.9	6.3	6.0	6.3	5.4	4.7	p4.6f	...
22	4.4	p3.5f	p3.4f	p3.0f	3.0	3.3	4.1	4.5	4.9	5.6	6.1	6.0	6.1	6.5	6.5	6.2	6.2	5.9	6.1	6.0	6.2	6.1	5.9	5.8	5.2
23	6.0	5.0	p5.3f	5.2	4.5	4.8	6.2	7.5	9.0	9.3	10.2	10.5	9.9	9.2	9.1	9.3	8.6	8.1	8.1	7.2	7.2	6.6	6.6	7.0	7.5
24	7.7	6.4	5.7	4.9	4.5	4.0	4.6	4.7	4.8	6.0	6.7	p6.6a	5.8	7.3	6.7	6.6	6.5	6.4	6.4	5.6	6.0	6.2	6.3	6.2	5.9
25	6.4	5.8	3.3	2.6	2.0	3.5	5.0	5.8	5.8	6.2	6.4	7.2	7.4	8.1	8.1	8.0	7.8	7.7	7.5	7.2	7.1	6.7	6.5	6.0	6.2
26	5.7	5.1	4.9	4.5	4.4	4.4	5.4	5.2	4.5	5.1	6.0	5.8	6.0	6.6	6.0	6.2	5.8	5.9	6.2	5.8	6.0	5.8	5.7	5.2	5.5
27	5.0	4.3	3.9	3.6	3.3	3.5	4.3	4.9	5.5	5.8	6.6	7.0	7.4	7.5	7.9	8.0	7.6	7.2	7.0	7.1	p7.2j	6.7	6.5	6.5	6.0
28	6.3	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.9	7.7	8.3	7.4	6.8	6.2	6.4	6.3	6.1	5.8	5.5	...
29	5.5	5.3	5.0	3.4	2.7	3.0	3.7	4.8	5.6	6.0	6.6	7.6	7.8	7.7	7.3	7.7	7.3	6.7	7.4	7.3	6.9	6.5	6.0	5.6	6.0
30	6.0	5.5	5.0	3.9	3.5	3.3	4.0	4.9	5.1	5.7	6.2	6.3	7.1	p7.2j	7.5	6.8	6.7	6.7	7.1	p7.8j	p7.1j	6.2	5.2	5.2	5.8
31	5.1	5.0	4.8	4.0	3.3	3.2	4.4	5.2	5.8	5.7	5.8	p6.7c	7.6	7.8	8.4	7.8	7.5	7.6	7.6	7.0	6.5	5.6	5.5	5.0	6.0
MEAN*	6.2	5.8	5.1	4.4	3.9	4.2	5.2	5.8	6.2	6.8	7.4	7.8	8.0	8.2	8.2	8.0	7.8	7.6	7.5	7.3	7.0	6.5	6.2	6.1	6.6

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 364

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1945 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — DECEMBER 1945

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	275	265	...a	...a	280	250	230	225	355	350	p330	...c	...c	330	300	300	295	270	235	240	250	p255a	260	275	...
2	p275a	275	225	225	230	250	240	220	290	285	330	320	310	320	320	295	285	...a	...a	250	p260a	270	p275a	280	...
3	270	250	220	p240a	260	p250a	230	250	290	275	350	350	320	300	320	300	300	290	240	230	240	250	260	p270a	273
4	280	230	235	...a	...a	250	240	310	325	355	345	340	330	300	300	310	290	280	235	p245a	275	p280a	280	...a	...
5	...a	235	240	230	230	230	240	280	300	300	335	300	320	350	310	320	295	260	235	230	...a	...a	280	275	...
6	270	250	235	p210a	p215	250	240	250	330	345	320	305	300	320	310	320	310	300	260	230	...a	...a	...a	290	...
7	270	240	235	220	250	250	...a	...a	330	330	320	330	325	340	295	315	300	280	270	240	225	...a	...a	...a	...
8	...a	...a	...a	245	235	240	245	240	365	330	320	320	300	310	320	320	330	280	250	250	240	220	255	...a	...
9	...a	265	200	p215a	260	265	240	320	320	365	455	370	390	335	330	320	320	330	...a	...a	...a	...a	275	...a	...
10	...a	230	250	230	240	245	230	315	375	300	345	325	355	350	345	335	350	p330	p250	245	260	250	270	p280a	...
11	p260a	245	p230a	p230a	245	250	245	p275a	335	320	p345a	325	345	320	295	300	270	p320	270	245	270	240	225	255	278
12	...a	...a	220	240	235	230	240	235	315	300	350	355	360	335	335	350	350	330	310	310	330	350	350	330	...
13	330	305	300	320	320	295	280	280	330	330	320	315	330	330	300	290	290	280	230	260	245	260	300	290	297
14	235	...a	...a	275	310	295	...k	...k	...k	...k	...k	...k	...k	...k	...k	435k	375k	460k	265k	275k	280k	255k	245k	300k	...
15	255k	240k	235k	310k	285k	290k	250k	...k	...k	...k	...k	...k	...k	...k	...k	380	410	350	230	240	235	270	p295a	280	...
16	...a	...a	275	250	270	250	235	310	300	320	315	325	345	340	330	325	320	300	225	245	220	245	270	p275a	...
17	245	250	p250a	250	250	245	p240a	300	320	335	340	345	340	320	320	310	280	290	240	245	230	250	290	290	282
18	270	p250a	230	250	260	265	240	240	370	p350a	305	300	350	290	340	330	285	290	270	240	250	265	240	...a	...
19	...a	260	...a	...a	...a	...a	240	210	400	350	330	345	...a	...a	335	p345a	330	320	...a	...a	p270a	p270a	...a	...a	...
20	240	270	210	...a	...a	260	240	360	...k	...c	...c	...c	...	...	...	...	...	...	...	...	...	...	...	...	...
21	...	...	...	...	...	...	...c	...c	...c	...k	...c	380	375	415	350	380	390	370	310	p280a	p270a	280	270	275	...
22	265	p260a	p265a	p265a	280	300	...a	...	...	430	400	415	425	375	360	390	350	345	240	250	260	275	275	275	...
23	280	p290a	p280a	280	p270a	270	240	p275a	310	280	320	300	290	300	320	320	300	300	230	230	240	p275a	275	p260a	281
24	245	250	260	280	230	310	...k	...k	...k	375	310	...a	...k	320	360	340	335	305	240	260	275	300	280	280	...
25	260	220	200	230	245	250	235	290	300	320	330	320	350	330	325	310	310	280	250	250	245	p260a	250	245	277
26	p285a	290	290	270	260	250	250	290	...k	...k	425	430	400	350	480	330	380	340	240	270	p275a	280	260	290	...
27	p250a	250	270	240	290	250	320	320	370	375	350	345	320	330	325	300	295	290	240	240	260	265	265	260	292
28	240	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	320	350	310	p290c	280	230	250	245	260	270	300	...
29	290	255	225	210	275	270	250	390	360	350	360	315	330	300	340	310	300	300	255	240	245	p255a	260	280	290
30	280	270	230	225	260	275	240	340	380	350	320	365	325	310	305	330	345	335	240	250	p245a	245	250	...a	...
31	...a	250	235	210	240	255	240	310	290	315	...a	...c	330	350	295	280	310	290	240	225	220	240	p260a	285	...
MEAN*	267	256	242	246	259	260	245	285	333	333	345	339	340	329	329	328	320	310	249	249	254	264	270	280	289

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = $f^{D}F2$ EQUAL TO OR LESS THAN $f^{D}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 365

DECEMBER 1945

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1945

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.6	4.8	...c	...c	...c	5.0	4.9	4.8	4.6	4.0	...
2	...	...	4.6	4.8	5.2	4.7	5.0	5.1	5.0	4.7	4.4	...a	...
3	...	...	4.6	4.7	p4.8	...a	4.9	4.7	4.8	4.8	4.6	4.2	...
4	...	4.2	4.6	...a	...a	4.7	...a	...a	4.8	4.7	4.5	4.0	...
5	...	4.2	4.5	4.8	4.8	4.8	4.8	4.9	4.8	4.7	4.4	3.9	...
6	...	...	4.7	...a	4.7	...a	4.9	4.9	4.7	4.6	4.5	4.1	...
7	...	...	...a	...a	...a	4.9	4.9	5.2	4.8	4.6	4.5	4.0	...
8	...	...	4.9	4.7	4.8	4.9	4.8	4.8	4.8	4.7	4.5	4.0	...
9	...	4.2	4.4	4.6	4.7	4.7	4.7	4.7	4.7	4.6	4.4	...a	...
10	...	4.0	4.6	4.6	4.8	...a	...a	4.7	4.7	4.7	4.6	4.3	...
11	...	...	4.8	...a	...a	5.0	4.9	4.9	4.7	4.6	4.4	4.3	...
12	...	...	4.6	4.8	4.8	4.9	5.0	4.9	4.8	4.7	4.7	4.2	...
13	...	...	4.7	...a	...a	...a	5.0	5.0	4.8	4.8	4.6	4.2	...
14	3.2	3.7	4.0	4.4	4.4	4.6	4.6	4.4	4.5	4.4	4.1	4.0	...
15	...	3.8	4.2	4.3	4.4	4.6	4.6	4.5	4.5	4.5	4.3	4.3	...
16	...	4.3	4.7	4.8	4.9	5.0	5.0	5.0	4.9	5.0	4.8	4.3	...
17	...	4.3	4.8	5.1	5.1	5.1	5.1	5.0	5.0	4.8	4.6	4.1	...
18	...	...	4.7	p5.0a	5.0	5.1	5.4	5.1	5.1	5.0	4.7	4.4	...
19	...	...	4.8	p4.9a	4.8	5.0	...a	...a	...a	...a	4.6	4.0	...
20	...	4.3	4.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
21	...	...	...c	4.3	p4.5c	4.7	4.9	4.9	4.8	p4.8a	4.8	4.4	...
22	...	4.0	...a	4.3	4.5	4.7	4.7	4.7	4.7	4.6	4.4	4.2	...
23	...	...	4.6	...a	4.7	4.8	4.9	4.9	p4.9a	4.8	4.5	4.0	...
24	3.6	3.7	4.0	4.5	4.6	4.8	4.7	4.7	4.7	4.6	4.4	4.0	...
25	...	3.9	4.4	4.7	4.8	4.7	5.0	4.8	4.7	4.6	4.5	4.2	...
26	...	3.9	4.1	4.4	4.5	4.6	4.5	4.6	4.5	4.4	4.3	4.1	...
27	3.1	4.0	4.3	4.6	4.5	4.7	4.6	4.8	4.6	4.6	4.3	4.1	...
28	...	...	...c	...c	...c	...c	...c	4.6	4.6	4.5	p4.2c	3.9	...
29	...	3.9	4.3	4.6	4.7	4.6	4.8	4.7	4.8	4.5	4.3	4.0	...
30	...	3.8	4.2	4.4	4.5	4.8	4.5	4.6	4.5	p4.5c	4.5	4.4	...
31	...	4.0	4.2	...a	...a	...c	4.7	4.6	4.5	4.5	4.3	4.0	...
* MEAN	3.3	4.0	4.5	4.6	4.7	4.8	4.8	4.8	4.7	4.7	4.5	4.1	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	210	240	...c	...c	...c	...a	...a	...a	...a	230	...
2	...	...	...a	...a	220	...a	...a	220	250	220	...a	...a	...
3	...	...	230	...a	p220	...a	...a	220	240	225	225	230	...
4	...	240	...a	...a	...a	200	...a	...a	...a	245	230	220	...
5	...	220	210	210	240	210	190	205	215	...a	235	220	...
6	...	...	...a	...a	215	...a	190	250	245	...a	220	...a	...
7	...	...	...a	...a	...a	...a	...a	...a	240	...a	235	245	...
8	...	...	230	220	210	190	190	230	q250	220	215	240	...
9	...	...a	225	220	200	200	190	240	...a	220	255	...a	...
10	...	220	210	...a	...a	...a	...a	195	220	240	230	q240	...
11	...	...	225	...a	...a	220	200	p205a	210	220	235	q225	...
12	...	...	215	215	190	185	...a	...a	...a	...a	220	230	...
13	...	...	255	...a	...a	...a	...a	200	...a	q275h	245	230	...
14	240k	220k	220	210	180	...k	...a	260	250	240	235	240	...
15	...	230k	215	220	210	200	200	225	220	225	230	240	...
16	...	210	...a	...a	205	p200a	190	235	210	220	210	220	...
17	...	230	...a	210	p210a	210	220	210	p220a	225	225	225	...
18	...	...	240	...a	...a	200	210	p220a	225	220	p225a	230	...
19	...	...	230	...a	220	...a	...a	...a	...a	...a	215	240	...
20	...	225	...a	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
21	...	...	...c	210	p205c	200	250	245	240	...a	...a	250	...
22	...	...	...a	...a	220	220	200	200	220	230	q240h	235	...
23	...	...	...a	...a	200	200	245h	210	p215a	220	220	220	...
24	250	235	240	240	220	175	200	230	220	230	210	220	...
25	...	220	225	210	215	...a	...a	...a	230	220	p230a	235	...
26	...	220	210	240	...a	...a	245	240	p230a	225	230	230	...
27	220	260	230	240	210	220	p220a	225	220	220	200	230	...
28	...	...	...c	...c	...c	...c	...c	220	220	220	p235c	225	...
29	...	230	215	225	200	200	220	210	220	210	210	220	...
30	...	220	200	210	200	195	175	210	210	...c	...c	230	...
31	...	235	...c	...c	...a	...a	...c	200	p210a	215	p225a	235	...
* MEAN	237	229	223	221	210	201	208	221	226	227	226	231	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 366

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

DECEMBER 1945 DECEMBER 1945

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...e	0.6	0.7	0.8	...c	...c	...c	0.9	0.9	0.9	0.8	0.8	0.7	2.1	2.7	3.0	q3.4	...c	...c	...c	3.8	3.6	3.5	3.0	2.7	...e
2	0.6	0.6	0.7	0.9	0.9	0.9	0.9	1.0	1.0	0.8	1.0	0.7	0.7	2.3	2.8	3.2	3.3	3.5	3.5	3.6	3.5	p3.5a	3.5	3.1	2.7	1.9
3	0.6	0.6	1.0	0.9	0.9	0.8	0.9	1.0	0.9	0.9	0.9	0.8	0.6	1.9	2.7	3.0	3.0	...a	...a	...a	...a	3.5	3.4	3.1	2.7	2.0
4	0.6	0.7	0.8	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6	2.1	2.7	3.2	3.3	3.4	p3.3a	3.2	3.7	3.6	3.4	3.1	2.7	2.0
5	0.6	0.6	0.7	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.7	0.7	0.6	2.1	2.5	3.2	...a	...a	...a	...a	3.7	3.5	3.4	3.1	2.7	2.0
6	0.6	0.6	0.6	0.6	0.8	0.7	0.9	p0.9c	0.9	0.8	q0.8	0.7	0.6	2.1	2.7	3.1	3.4	3.5	3.4	p3.6a	3.6	3.5	3.3	3.1	2.7	1.8
7	0.6	0.6	1.0	0.6	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.6	0.6	2.1	2.7	3.0	3.3	3.4	3.5	p3.7a	3.7	3.5	3.3	3.1	2.7	2.2
8	0.6	0.7	0.7	0.7	0.7	0.6	0.8	0.9	0.9	0.8	0.8	0.7	0.6	2.2	2.7	3.1	3.3	3.2	...a	...a	...a	q3.5	3.3	p3.1a	q2.7	q2.2
9	...e	0.6	0.6	0.6	0.7	0.9	0.8	0.8	0.9	0.9	0.8	0.7	0.6	2.1	2.7	3.0	3.2	3.3	3.2	3.6	3.6	3.4	3.4	3.1	2.7	2.1
10	0.6	0.7	0.9	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.6	2.2	2.7	3.1	3.4	3.4	q3.6a	3.5	3.6	3.5	3.4	3.1	2.8	2.2
11	0.6	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.6	2.3	2.8	3.1	q3.3a	3.5	q3.6	...a	...a	3.6	3.4	3.2	2.7	...a
12	0.6	0.7	0.7	0.8	0.9	0.8	0.9	0.9	0.8	0.8	0.7	0.6	...e	2.3	2.8	3.1	p3.3a	3.6	...a	...e	...e	...a	3.2	3.2	2.9	2.3
13	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.6	2.2	2.6	3.1	3.3	3.5	3.5	3.5	...e	...e	...a	...a	2.9	2.3
14	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.9	0.8	0.8	0.7	0.6	0.6	2.1	2.6	3.0	3.2	3.5	3.5	3.5	3.7	3.5	3.3	3.1	2.7	2.1
15	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.7	0.7	0.7	0.7	2.0	2.6	2.8	3.2	3.5	3.6	3.6	3.7	3.6	3.2	3.1	2.8	2.2
16	...e	0.7	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	2.2	2.8	3.2	3.4	3.5	3.6	3.7	3.7	3.5	p3.5a	3.2	2.8	2.1
17	...e	0.6	0.6	0.6	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.7	2.3	2.8	3.2	3.1	3.4	3.5	...a	...a	...a	3.5	3.2	2.8	2.3
18	0.6	0.6	0.8	...e	0.7	0.6	0.8	0.9	0.9	q1.0	0.7	0.7	0.6	2.1	2.7	3.1	3.3	3.4	3.4	3.5	3.6	3.4	3.5	...a	...a	...a
19	0.7	0.7	0.6	0.6	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	2.2	q2.3	q2.8	...a	...a	3.8	3.6	3.6	3.5	3.5	3.3	3.0	2.2
20	0.6	0.6	...c	...c	...c	...	...	...	...	...	...	...	...	2.1	2.7	3.0	...c	...c	...c	...	...	...	...	...	...	...
21	...c	...c	...c	0.7	p0.8c	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	...c	...c	...c	3.1	p3.3c	3.5	3.6	3.5	3.5	3.4	3.2	2.8	2.3
22	...e	0.6	0.7	0.7	0.7	0.9	0.8	0.9	0.9	0.9	0.8	0.7	0.7	2.0	2.6	3.0	3.2	3.2	...e	q3.8	3.7	3.5	3.4	3.1	2.7	2.2
23	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.6	0.7	2.2	2.7	3.1	3.3	3.4	...a	...a	...a	q3.1	p3.1a	3.1	2.8	...a
24	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.6	2.1	2.7	3.1	3.3	3.5	3.4	p3.6a	q3.7	3.5	p3.4a	q3.2	2.8	2.3
25	0.6	0.6	0.6	0.7	0.6	0.7	0.9	0.8	0.8	0.8	0.7	0.7	0.6	2.0	2.5	3.0	3.2	3.3	q3.5	q3.6	q3.5	3.5	3.3	3.1	2.7	2.3
26	...e	0.6	0.7	0.7	0.9	q1.2	0.9	0.8	0.9	0.9	0.7	0.7	0.7	2.0	p2.6a	3.1	3.5	3.7	3.8	3.5	3.5	3.5	3.4	3.1	2.7	2.0
27	0.6	0.6	0.7	0.6	0.7	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.6	2.0	2.6	3.0	3.2	3.4	3.7	3.5	3.5	3.4	3.3	3.0	2.8	2.2
28	...c	...c	...c	...c	...c	...c	...c	0.9	0.9	0.8	0.6	0.7	0.6	...c	...c	...c	...c	...c	...c	...c	...a	...a	q3.3	p3.0c	2.7	2.3
29	0.6	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.5	2.0	2.6	2.9	3.0	3.4	3.5	3.7	3.6	3.4	3.3	3.1	2.7	2.3
30	0.6	...e	0.6	0.6	0.8	0.8	1.0	...c	...c	...c	...c	...c	...c	...a	...a	2.7	3.1	...a	...a	3.5	...c	...c	...c	...c	2.7	2.2
31	...c	...c	...c	...c	...c	...c	0.8	0.9	0.9	0.8	0.7	0.7	0.6	2.1	2.6	3.0	3.4	...c	...c	3.4	3.4	3.4	3.3	3.1	2.7	2.2
* MEAN	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	2.1	2.7	3.0	3.3	3.4	3.5	3.6	3.6	3.5	3.4	3.1	2.8	2.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 367

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1946 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — JANUARY 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	4.8	4.8	5.0	4.8	3.5	3.5	5.1	5.4	6.0	5.7	6.0	6.0	6.1	6.8	7.2	6.9	6.6	6.9	7.7	8.0	7.8	7.4	6.7	6.4	6.0
2	6.2	6.0	4.7	3.7	3.3	3.4	3.8	4.1	4.1	4.5	4.6	5.0	p4.8a	5.0	5.1	5.3	5.5	5.7	5.8	5.8	6.0	5.5	5.0	4.9	4.9
3	5.0	4.8	4.7	4.2	3.8	3.7	4.3	4.4	5.0	5.6	6.2	6.6	6.4	6.6	6.2	6.3	6.6	6.9	6.6	7.2	q7.7j	5.9	6.7	6.5	5.8
4	5.4	4.8	2.5	1.7	2.7	2.8	3.5	5.3	5.0	q5.1	4.7	4.7	4.5	...g	...g	4.2	4.2	4.4	4.8	4.8	5.0	5.0	4.8	4.3	...
5	4.3	q3.1f	q1.8f	1.9	1.8	2.5	3.7	3.6	4.1	4.2	4.6	p4.8a	5.0	5.0	4.6	4.9	5.0	5.0	5.2	5.5	4.7	4.4	4.0	4.0	4.1
6	3.7	3.7	3.0	3.0	2.4	2.8	4.4	5.0	5.5	5.7	6.0	6.9	7.9	8.2	7.5	8.1	8.0	8.1	7.7	7.0	6.4	5.3	5.1	5.7	5.7
7	5.6	4.9	4.0	3.7	3.2	3.2	4.2	5.1	5.2	6.1	p6.7a	7.3	7.6	7.2	7.8	8.6	7.5	6.5	6.4	6.3	6.0	5.7	5.5	5.3	5.8
8	5.5	5.0	4.3	3.4	3.3	3.2	4.4	5.5	6.5	6.7	6.1	7.2	8.0	8.2	7.5	7.3	7.4	7.5	7.0	7.0	7.2	5.9	5.1	4.6	6.0
9	4.4	q4.5f	...f	...f	3.0	2.9	4.9	5.9	6.2	6.3	6.8	7.1	7.3	7.0	7.4	8.0	8.0	7.6	7.3	6.9	6.3	5.8	5.5	5.5	...
10	5.7	5.1	4.9	4.2	4.1	p3.7c	4.8	5.0	5.4	5.3	6.0	6.1	6.6	7.8	7.7	8.0	7.2	7.7	7.3	7.1	7.4	6.8	6.3	6.2	6.1
11	6.3	5.6	5.6	5.4	4.3	4.6	6.3	6.0	6.0	6.3	6.4	6.6	6.9	7.0	7.8	8.9	8.9	7.3	7.2	...a	q6.5a	q6.1a	5.5	5.6	...
12	6.1	5.0	4.3	3.6	3.1	3.0	3.9	4.6	4.7	5.2	5.6	5.6	6.2	6.6	6.5	7.3	7.5	7.5	6.4	6.2	6.4	5.7	5.6	5.6	5.5
13	5.5	5.2	4.1	3.8	p3.2f	3.1	4.6	4.5	5.0	5.5	5.1	5.7	6.2	6.7	6.8	7.1	6.6	6.0	5.8	5.9	6.4	5.9	5.7	6.4	5.4
14	6.5	5.7	4.8	4.3	3.8	3.7	5.0	5.8	5.8	6.4	6.7	6.9	7.3	8.4	9.5	10.1	9.3	8.4	7.9	7.4	7.6	7.5	6.6	6.2	6.7
15	6.1	5.6	5.4	4.9	4.2	4.0	5.0	6.3	6.3	6.9	7.2	7.2	7.9	8.7	8.7	9.1	8.8	7.8	7.5	7.1	6.7	6.9	6.6	6.4	6.7
16	q5.7f	q6.4f	q5.3f	q4.5f	q4.0f	q3.2f	4.9	5.6	6.6	7.6	8.0	9.1	9.2	9.3	10.2	9.5	7.9	7.7	7.4	6.6	6.9	6.3	6.1	5.7	6.8
17	5.7	4.7	4.0	q3.8f	q4.0f	q4.4f	q5.4f	6.0	6.1	7.2	8.9	9.2	9.5	9.4	9.6	9.0	8.3	7.7	7.9	6.9	6.8	6.6	q7.1f	7.2	6.9
18	7.0	6.1	5.0	4.8	4.3	4.2	4.4	5.2	6.2	6.8	8.1	9.6	9.5	9.4	8.1	...c	...c	q7.3j	q6.4j	5.6	5.5	5.6	5.7	5.7	...
19	5.4	4.3	q3.6f	q3.2f	q2.6f	2.8	3.9	4.4	p5.2a	5.6	6.4	6.5	7.6	8.0	7.8	7.5	6.6	6.2	5.8	6.0	6.0	q5.5f	q5.5f	5.8	5.5
20	5.8	5.5	4.8	4.5	q4.2f	4.2	4.5	4.7	5.2	5.2	5.8	6.4	7.2	7.0	6.5	5.9	j5.6j	p5.4a	5.4	5.4	5.1	5.0	q4.8f	q4.9f	5.0
21	q5.0f	q4.7f	q4.7f	4.3	p3.7a	q3.2f	4.5	5.9	6.5	q7.3j	8.4	9.1	9.5	9.5	9.2	8.5	7.4	6.7	6.2	6.2	6.6	6.0	5.8	q6.0f	6.4
22	q6.0f	q4.9f	q4.6f	q4.5f	q4.2f	3.6	5.2	6.3	6.4	6.6	7.2	8.0	8.3	9.3	9.0	8.5	7.2	6.2	5.6	5.2	4.6	4.5	4.0	4.0	6.0
23	4.1	q4.2a	q3.7f	q3.0f	q2.7f	2.8	4.7	6.0	6.3	6.5	7.3	8.0	8.2	8.5	8.8	7.6	6.6	6.3	6.5	q7.2c	7.4	7.6	7.1	7.2	6.2
24	6.4	4.8	4.1	4.0	3.7	3.2	3.6	4.2	5.5	6.2	7.0	8.2	8.5	8.7	9.9	9.3	8.5	7.9	6.6	6.4	5.5	5.2	5.6	5.6	6.2
25	5.1	5.0	q4.8h	3.0	2.3	2.3	3.6	4.0	4.6	5.5	6.3	7.0	8.5	8.2	8.1	8.0	7.0	6.8	6.5	5.5	5.3	5.1	q5.0j	4.8	5.5
26	4.8	4.7	4.7	4.6	3.6	2.4	4.1	4.7	4.9	5.3	5.7	6.2	6.5	6.9	7.4	6.9	6.8	6.5	5.8	6.4	5.5	q5.2j	4.8	q5.0j	5.4
27	4.7	4.5	4.0	4.0	3.4	3.1	3.9	4.6	q5.1j	q5.2j	6.0	7.3	7.8	8.3	8.7	7.6	7.1	6.7	6.1	5.9	6.7	6.6	5.7	q5.1j	5.8
28	4.7	4.3	4.0	3.7	3.8	3.5	4.4	6.0	6.3	6.4	6.5	q6.7h	7.0	7.3	7.7	7.4	7.6	7.7	7.3	6.7	6.1	5.6	5.5	5.0	5.9
29	5.0	4.5	4.0	3.7	3.5	3.3	q4.6h	5.3	q5.7h	6.3	6.5	6.3	6.8	7.0	7.1	7.5	7.1	7.2	6.6	6.0	6.1	6.3	6.3	6.1	5.8
30	6.3	5.8	5.0	4.3	3.9	3.6	4.5	5.7	6.0	6.8	6.5	q5.8b	6.1	6.2	6.5	6.5	6.5	7.0	6.5	6.1	6.8	5.8	5.8	5.6	5.8
31	5.5	5.2	4.6	3.7	3.4	3.3	4.8	5.8	6.7	7.1	7.2	...c	...c	8.0	8.3	8.4	...c	...c	...c	...c	...c	...c	...c	...c	...
MEAN*	5.4	5.0	4.3	3.9	3.4	3.3	4.5	5.2	5.6	6.0	6.5	6.9	7.3	7.7	7.8	7.6	7.2	6.9	6.6	6.4	6.3	5.9	5.6	5.6	5.9

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 368

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JANUARY 1946 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — JANUARY 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	270	p250a	255	p265a	265	...a	...a	330	300	375	365	...a	425	360	330	p335a	340	p320a	300	270	240	240	250	250	...
2	250	235	250	260	280	285	230	490k	...k	530k	650k	450k	...a	460	480	415	390	340	300	260	240	250	280	270	...
3	...a	...a	...a	...a	330	280	220	...c	430	445	345	325	375	325	370	335	345	320	350	295	295	380	300	270	...
4	360	260	300	350	260	310	260	250	250	430	...k	...k	...k	...g	...g	...k	...k	600k	295	p290a	290	300	p290a	285	...
5	p270a	260	260	320	320	300	240	230	...a	...k	545k	...a	...a	455	...k	490	420	385	315	255	230	280	290	...a	...
6	...a	245	230	...a	...a	270	240	225	350	370	360	365	320	300	q345	q325	300	295	260	240	210	245	290	310	...
7	260	250	250	275	245	290	230	290	425	360	p340a	325	325	325	325	300	275	315	230	240	230	255	260	280	288
8	250	240	245	240	235	245	220	315	290	350	410	360	320	300	p320a	345	325	285	230	250	230	220	250	p240a	280
9	230	255	245	210	...a	...a	230	290	300	335	310	330	315	320	330	p300a	295	280	275	225	225	250	275	270	...
10	245	250	255	230	280	p265c	225	250	380	430k	360	390	385	320	325	300	310	290	265	250	245	230	260	270	294
11	p270a	270	260	235	p240a	250	235	230	235	340	380	370	390	390	370	330	280	290	285	...a	...a	...a	295	285	...
12	250	...a	...a	...a	...a	295	p330a	370	575	405	385	410	380	355	q370a	...a	295	265	250	240	235	250	250	255	...
13	250	225	250	290	270	270	...a	...a	325	345	...k	460	400	350	340	310	300	295	280	q265	...a	...a	295	p280a	...
14	230	240	250	250	290	255	230	225	280	310	320	p365c	390	350	325	300	q295	280	230	p245a	p250a	245	230	260	277
15	240	230	250	240	210	245	235	p250c	335	300	330	p360c	365	320	325	300	280	295	260	...a	...a	...a	275	250	...
16	270	...a	...a	...a	...a	q295f	...a	...a	...a	320	360	345	340	350	300	295	300	305	220	250	250	265	265	270	...
17	230	210	250	...a	...a	...a	...a	235	...k	385	310	330	335	320	305	280	290	295	p230a	240	250	...a	...f	...a	...
18	230	235	250	240	260	p285a	250	330	345	330	340	330	320	320	300	...c	...c	285	260	240	280	280	295	p260a	...
19	245	q260a	q280a	p270a	270	290	250	550	p475a	450	355	410	360	340	320	310	315	310	230	265	250	260	p255a	250	315
20	255	245	220	250	265	285	260	410	390	520	420	360	360	315	320	p335a	360	p325a	230	260	p255a	270	280	...a	...
21	...a	...a	...a	...a	...a	240	...a	...a	365	295	340	320	310	310	310	295	295	290	250	q230	230	250	280	q280a	...
22	...a	...a	260	270	p265a	260	240	260	370	360	355	330	350	315	310	315	300	285	225	...a	...a	...a	320	310	...
23	q265a	...a	...a	...a	...a	295	230	330	270	340	345	320	320	330	310	310	320	315	245	250	260	260	265	250	...
24	230	260	270	250	235	250	235	245	240	305	380	345	315	340	300	290	280	270	240	245	250	290	300	300	278
25	265	265	250	...a	...a	315	260	...a	...a	350	360	360	320	310	305	280	320	300	255	240	245	265	265	290	...
26	280	265	240	215	225	q240	230	210	510	420	p405c	390	365	375	325	330	320	300	p260a	240	250	265	285	270	306
27	270	270	p245a	240	270	...a	...a	400	...c	...c	...c	330	310	320	290	290	285	280	260	250	255	240	235	260	...
28	250	250	240	275	250	240	250	250	300	295	330	370	375	350	320	310	300	290	...a	...a	...a	260	265	260	...
29	260	240	q240	250	240	250	240	290	330	305	350	...b	360	365	380	315	325	290	290	230	250	270	265	265	...
30	250	220	240	240	250	250	270	280	330	310	300	...b	370	395	370	370	340	300	265	240	230	250	260	260	...
31	250	225	p245a	250	270	p275a	260	240	325	310	340	...c	...c	335	330	310	...c	...c	...c	...c	...c	...c	...c	...c	...
MEAN*	256	246	251	257	262	271	244	299	349	368	371	362	352	344	333	322	314	310	262	250	247	263	273	270	295

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 369

JANUARY 1946 | JANUARY 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	4.0	4.3	4.4	...a	...a	4.6	4.5	4.5	...a	4.2	...a	3.5
2	...	3.8	3.9	...a	4.3	4.4	...a	4.4	4.3	4.3	4.2	4.0	3.5
3	...	...	4.1	4.6	4.4	4.6	4.6	p4.6a	4.7	4.3	4.4	4.1	3.8
4	...	...k	...k	4.4	4.3	4.3	4.2	4.2	4.1	4.1	3.8	q3.5	3.4
5	...	...	...a	4.0	4.2	...a	...a	4.4	4.4	4.3	4.1	4.0	3.5
6	...	...	4.4	4.5	4.6	4.6	4.5	4.6	4.6	4.5	4.6	4.1	3.5
7	...	3.8	4.5	...a	...a	4.7	...a	...a	4.6	4.5	4.3	4.3	...
8	...	4.1	4.2	4.5	4.6	4.9	4.7	...a	...a	4.6	4.5	4.1	...
9	...	4.0	4.4	4.6	4.5	p4.8a	4.7	4.7	...a	...a	4.3	4.1	3.5
10	...	...	4.4	4.7	4.6	4.7	4.7	4.6	4.6	4.5	4.4	4.2	3.5
11	...	...	...	4.6	4.5	4.6	4.7	4.6	4.6	4.5	4.4	4.2	3.5
12	...	3.9	4.3	4.3	4.4	4.6	4.7	4.6	...a	...a	4.4	4.0	3.6
13	...	...	q4.2	4.5	...k	4.7	4.8	4.6	4.5	4.3	4.1	...	...
14	...	...	4.3	4.6	p4.8a	4.9	5.0	4.8	4.8	4.6	4.5	4.3	...
15	...	...c	4.7	4.7	4.8	q4.8h	4.9	5.0	4.8	4.6	4.6	4.4	...
16	...	...	...	4.8	p4.8a	4.8	4.9	q5.0h	q4.8h	4.6	4.5	4.3	...
17	...	...	q5.4	...a	q4.5h	q4.9h	q4.9h	4.9	4.8	4.8	q4.5h	4.3	...
18	...	4.1	4.5	4.8	4.8	4.9	4.9	5.0	4.8	...c	...c	4.3	q3.1
19	...	4.2	p4.3a	4.5	4.7	4.7	q4.7a	4.8	4.8	4.6	4.5	q4.3	...
20	...	3.8	4.0	4.4	4.5	4.7	4.6	4.6	...a	...a	4.4	...a	...
21	...	...	4.6	4.7	4.8	4.9	4.8	4.8	4.7	p4.6a	4.6	4.3	...
22	...	4.0	4.5	4.7	q4.7h	4.7	4.7	q4.7h	q4.7h	4.6	4.5	4.1	...
23	...	4.3	4.5	4.8	4.7	4.7	q4.7h	q4.7h	q4.8h	4.7	4.5	4.2	...
24	...	...	4.5	4.6	5.2	4.6	4.8	q4.9h	4.8	q4.7h	4.4	4.2	...
25	...	...	...	4.4	4.5	4.6	q4.9h	4.7	4.6	q4.5h	4.4	4.0	3.3
26	...	...	4.4	4.3	4.5	4.5	4.6	4.6	4.6	4.5	4.3	4.0	...
27	...	4.2	4.5	4.5	p4.6h	4.8	4.7	4.7	4.6	4.5	4.5	4.2	3.4
28	...	...	4.5	4.5	4.7	q4.7h	q5.1h	5.0	4.7	4.6	4.5	4.2	...
29	...	4.0	4.5	4.7	4.6	q4.6h	q4.8h	4.8	q4.9h	4.8	4.5	4.2	3.6
30	...	4.0	4.6	4.6	4.7	...b	...b	4.9	4.9	p4.8b	4.5	4.3	3.6
31	...	...	4.5	4.7	4.8	...c	...c	5.0	5.0	4.8	...c	...c	...c
MEAN*	...	4.0	4.4	4.6	4.6	4.7	4.7	4.7	4.7	4.6	4.4	4.2	3.5

MINIMUM VIRTUAL HEIGHT OF F1 REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	220	280h	...a	...a	...a	...a	225	...a	...a	...a	...a	...a
2	...	200h	...a	...a	205	...a	...a	...a	...a	q230a	230	240	230
3	...	...	245	240	210	230	200	p205a	210	190	215	225	275h
4	...	...k	...k	...a	200	290h	...k	...a	225	240	230	...a	...a
5	...	...	...a	210	...a	...a	...a	220	220	225	205	240	240
6	...	...	220	220	205	200	215	220	205	215	215h	215	220
7	...	...a	...a	...a	...a	200	...a	...a	195	220	220	210	...
8	...	250	240	230	210	200	...a	...a	...a	215	220	225	...
9	...	235	230	225	220	p230a	240	210	...a	...a	215	225	245
10	...	...	230h	230	200	215	p225a	240	215	210	205	225	215
11	...	...	...	225	210	p215a	220	220	200	...a	...a	...a	...a
12	...	250	200	210	...a	...a	...a	245	...a	...a	...a	...a	215
13	...	...	...a	q285h	...k	235	...a	...a	...a	230	220	...a	...
14	...	...	q210	215	p220a	220	q200	225	210	...a	...a	...a	...
15	...	...c	230	215	205	q200h	...a	...a	230	220	235	...a	...
16	...	...	...	q220	...a	...a	...b	...a	q250h	q230h	p195a	215	...
17	...	...	220	p200a	195	200	220	...b	220	235	200	220	...
18	...	235	230	210	200	q230h	q210	220	...a	...c	...c	210	210
19	...	230	...a	...a	...h	240	p210a	210	220	p225	q230a	240	...
20	...	250	245	p230a	220	p205a	190	q195h	...a	...a	...a	...a	...
21	...	...	240	235	p215a	200	...a	...a	200	p215a	235	...a	...
22	...	230	265	220	...a	...a	220	195	210	q210h	245	225	...
23	...	235	260	240	225	200	180	185	q170h	240	210	220	...
24	...	...	210	p210h	210	210	250	220	q210h	210	195	200	...
25	...	...	...	250	250	240	200	...a	...a	290	220	210	235
26	...	...	210	200	200	200	200	230	210	230	200	215	...
27	...	200	220	200	p210h	q220h	200	200	210	215	p205a	240	215
28	...	...	220	215	190	q170h	240	p220c	210	230	240	...a	...
29	...	230	210	210	220	200	210	p205a	200	245	220	225	250
30	...	245	240	260	q210h	210	p250b	290	q215h	p265b	245	230	240
31	...	...	230	215	210	...c	...c	230	p230b	230	...c	...c	...c
MEAN*	...	232	231	224	210	215	215	220	212	228	219	223	233

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 370

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0.6	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.6
2	0.6	0.6	0.7	0.6	0.6	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.6
3	0.6	p0.6c	0.7	0.6	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.6
4	...e	0.6	0.7	0.6	0.6	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.6
5	0.7	0.6	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.6
6	0.6	...e	0.6	0.6	0.8	0.8	0.8	q0.7	0.7	0.6	0.6	0.6	0.6
7	0.6	0.7	1.0	0.9	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.6
8	0.6	...e	0.6	0.8	0.6	0.8	0.7	0.8	0.8	0.9	0.8	0.7	...e
9	...e	0.6	0.6	0.8	0.8	0.9	0.9	0.9	0.7	0.8	0.8	0.8	0.7
10	...e	0.7	0.8	0.7	0.7	0.7	0.9	0.9	0.7	0.7	0.6	0.7	0.6
11	0.6	0.7	1.0	0.8	0.9	0.8	0.9	0.9	0.9	0.8	0.6	0.7	0.6
12	...e	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.7	0.7	...e	...e
13	...e	...e	0.6	0.7	0.9	0.8	0.8	0.9	0.6	1.0	0.9	0.8	0.6
14	...e	0.6	0.9	0.7	0.7	1.0	0.9	0.8	0.9	0.8	0.8	0.7	0.6
15	...e	0.7	0.9	0.8	0.9	1.0	0.9	1.0	0.9	0.8	0.6	0.6	...e
16	...e	...e	0.6	0.7	0.7	0.9	0.9	1.0	0.9	0.9	0.8	0.9	0.7
17	...e	0.6	0.8	0.8	0.7	0.9	0.9	p0.9b	0.9	0.8	...e	...e	...e
18	0.6	0.7	0.9	0.8	0.8	1.0	1.2	0.8	0.9	...c	...c	0.6	0.6
19	0.6	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.7	0.5
20	0.6	0.6	0.6	0.7	0.7	0.9	0.9	0.7	0.7	0.9	0.8	0.6	...e
21	0.6	0.6	1.0	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6
22	...e	0.6	0.6	0.8	1.0	0.9	0.9	0.9	0.8	0.9	0.9	0.7	0.7
23	...e	0.6	0.5	0.9	0.9	0.9	0.8	0.9	0.7	0.7	0.6	0.7	0.7
24	0.6	0.6	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7
25	...e	0.6	1.0	0.8	0.7	0.9	1.0	0.8	0.8	0.9	0.7	0.7	0.5
26	0.5	0.7	0.6	0.8	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.7	0.6
27	...e	1.7	0.7	0.7	0.9	0.9	0.9	1.0	1.0	0.9	0.8	0.7	0.6
28	...e	0.6	0.8	0.7	0.7	1.0	0.9	0.7	1.1	0.9	1.0	0.9	0.7
29	0.6	0.7	0.7	1.8	1.9	2.3	1.1	1.0	1.0	1.0	1.0	1.0	0.6
30	0.5	1.0	0.9	1.0	1.0	3.8	1.0	1.1	2.6	...b	1.0	0.9	0.8
31	0.5	1.0	1.7	1.6	1.7	...c	...c	1.1	1.8	0.9	...c	...c	...c
MEAN*	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...a	2.7	3.1	3.3	3.4	3.5	3.4	3.5	3.4	3.4	3.2	2.4	...a
2	1.9	2.5	2.9	3.3	3.5	3.5	3.5	3.4	3.4	3.2	3.1	2.7	2.2
3	1.8	...c	q2.9	3.2	p3.3a	3.4	...a	...a	3.4	3.3	3.1	2.8	2.3
4	2.0	2.5	2.7	3.0	3.2	3.3	3.3	3.3	3.3	3.2	3.0	2.6	2.0
5	1.9	2.4	2.6	...a	q3.2	q3.2	...a	q3.5	3.4	3.3	3.0	2.7	2.2
6	2.1	2.6	3.2	3.3	3.5	3.5	3.5	3.4	3.2	p3.0c	2.8	2.7	2.2
7	1.9	2.5	3.0	3.2	3.3	p3.3a	3.4	3.2	3.4	3.2	3.2	2.7	2.2
8	2.0	2.6	3.1	q3.5	q3.5	3.5	3.6	3.5	3.4	3.3	3.1	2.8	2.3
9	2.0	2.6	...a	3.2	3.5	p3.5a	3.5	3.6	3.4	p3.4a	3.2	2.7	2.2
10	2.2	2.5	3.2	3.4	3.4	p3.6a	q3.7	q3.5	3.5	3.4	3.1	2.7	2.0
11	2.1	2.5	3.0	3.3	3.5	3.5	3.5	p3.4a	3.4	3.3	3.0	2.6	...a
12	...a	...a	2.9	3.3	3.5	3.5	3.5	3.6	3.6	3.3	3.0	2.4	...a
13	...a	2.6	3.0	3.3	3.5	3.5	...a	...a	...a	3.2	3.2	2.7	...a
14	2.2	2.7	3.1	3.3	3.5	3.6	3.6	3.7	3.7	q3.3	3.1	p2.8a	2.4
15	2.0	2.8	3.3	3.5	3.7	3.8	3.7	3.8	3.7	p3.4a	3.1	2.7	2.2
16	1.7	p2.3a	2.7	...a	...a	...a	3.7	3.8	3.5	3.4	3.1	3.0	2.4
17	q1.8a	2.3	...a	...a	q3.6	p3.5a	3.4	...b	...a	...a	3.2	2.9	2.3
18	...a	2.6	3.1	3.3	3.6	3.6	q3.5	...a	...a	...c	...c	2.9	2.4
19	2.0	2.6	3.0	3.3	3.5	3.7	3.7	3.6	3.4	3.4	3.1	p2.8a	2.4
20	1.9	2.6	3.0	p3.3a	3.4	3.3	p3.5a	3.7	...a	...a	...a	q3.1a	2.2
21	2.0	2.7	3.0	3.3	3.4	3.5	3.5	...a	3.6	q3.4	3.3	p2.8a	2.2
22	1.8	2.6	3.0	3.3	3.6	3.5	q3.5	...a	...a	3.4	3.2	2.9	2.4
23	2.0	2.6	2.9	3.3	3.4	q3.4	3.5	3.5	3.5	p3.3a	3.0	2.9	2.4
24	1.6	2.6	3.0	3.3	3.2	q3.5	3.5	3.6	3.5	3.4	3.2	2.8	q2.1
25	q2.0	2.4	2.8	3.3	3.3	3.5	3.5	p3.5a	q3.5	3.4	3.2	2.8	2.2
26	1.9	2.4	2.8	3.1	3.2	3.5	3.5	3.6	3.6	3.4	3.3	2.9	2.2
27	...a	2.5	2.8	3.2	3.4	3.5	3.6	3.5	q3.4	3.4	p3.2a	2.8	...a
28	1.9	2.7	3.0	3.1	3.5	...c	...c	...c	3.7	3.6	3.4	3.0	2.3
29	1.6	2.9	3.0	q3.2b	...b	...b	q3.4b	...a	...b	3.5	3.2	3.0	2.3
30	2.0	2.9	p3.2a	3.4	3.5	...b	3.1	3.0	3.0	...b	q3.4b	3.0	2.5
31	q2.0	2.6	3.1	3.2	...b	...c	...c	...b	...b	3.8	...c	...c	...c
MEAN*	1.9	2.6	3.0	3.3	3.4	3.5	3.5	3.5	3.5	3.4	3.1	2.8	2.3

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 371

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1946 | CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND | FEBRUARY 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	6.6	7.2	7.2	7.4	7.7	7.6	7.8	7.9	7.7	7.4	7.3	7.3	7.1	6.7	6.6	6.4	...
2	6.3	6.0	5.5	4.9	4.2	4.0	5.3	6.4	7.1	7.2	7.2	7.6	8.8	9.5	10.0	9.2	9.0	7.9	q7.3b	7.2	6.1	6.3	6.0	5.7	6.8
3	6.0	6.0	4.6	4.0	3.6	3.4	4.5	5.5	6.2	6.8	6.7	7.6	...b	...b	7.7	7.9	7.8	7.4	6.8	6.9	7.2	6.8	6.5	6.6	...
4	6.3	6.1	6.2	5.0	4.6	4.2	4.3	4.4	5.4	5.8	6.5	q7.5	6.6	6.8	p7.5b	7.4	7.2	7.3	6.8	6.6	6.8	6.2	6.0	6.0	6.2
5	6.4	5.9	4.6	4.1	3.4	2.9	4.1	4.5	5.1	5.6	5.8	6.6	7.1	7.8	7.8	p7.4b	7.2	6.9	6.8	6.6	6.3	6.2	6.0	5.4	5.8
6	5.7	5.0	4.9	4.6	...a	3.7	3.9	4.4	4.7	q6.3	7.2	8.0	9.3	p9.0b	8.3	8.0	8.3	8.1	8.0	7.6	7.0	5.7	5.5	5.4	...
7	5.5	5.1	4.8	3.5	3.3	3.1	5.0	6.8	7.9	8.1	7.9	8.9	9.6	9.2	8.9	9.1	8.8	9.1	8.5	8.6	8.4	7.0	8.0	q7.9f	7.2
8	q7.8f	3.5	3.1	3.0	2.7	2.2	2.9	3.4	...b	...b	...b	...g	...g	...g	...b	...g	q4.4k	4.5	4.3	4.9	5.4	5.5	5.5	4.7	...
9	4.6	4.4	3.9	3.8	3.1	2.7	4.4	5.8	7.4	7.8	8.9	8.9	9.3	9.0	9.3	9.2	9.0	8.3	8.5	8.6	7.3	7.2	6.5	6.2	6.8
10	5.9	4.8	5.8	6.1	5.6	4.1	4.5	5.8	6.2	6.5	7.1	7.0	7.4	8.2	9.1	9.7	9.1	8.3	7.7	7.9	7.5	7.0	6.2	5.9	6.8
11	6.0	6.0	5.6	4.9	4.4	3.9	4.2	5.2	5.8	6.4	7.1	7.1	8.2	9.0	9.6	9.0	8.9	8.6	8.7	8.5	8.2	7.6	7.5	7.0	7.0
12	6.8	6.3	5.5	5.4	5.1	4.8	5.0	6.0	6.9	8.0	8.5	8.8	9.5	9.9	9.7	10.3	10.4	10.4	9.8	8.9	8.1	q7.2j	q6.9j	6.5	7.7
13	6.3	q6.1j	q6.1j	q5.6j	5.0	4.2	4.8	5.7	5.7	6.6	7.4	8.3	8.6	8.7	8.3	8.7	8.6	9.0	8.2	7.6	7.6	6.8	6.5	6.4	7.0
14	6.4	6.3	5.0	4.6	3.8	3.4	4.4	6.1	7.5	8.5	9.0	8.8	9.0	9.0	9.7	9.3	8.7	9.0	9.8	9.4	7.2	7.3	6.6	6.7	7.3
15	5.9	5.3	4.5	4.1	3.5	3.3	4.0	5.9	5.7	6.0	7.3	5.9	6.1	q6.5	q7.2j	8.0	7.5	7.2	6.6	6.2	5.7	5.2	4.7	4.5	5.7
16	4.3	4.9	4.7	4.0	3.3	2.7	3.6	4.6	5.1	5.8	6.8	7.4	q7.3j	7.9	8.2	pd.8a	q8.5j	8.3	8.0	8.0	7.2	6.9	q6.6j	6.2	6.2
17	6.7	q5.4	q5.7j	5.2	4.6	4.3	5.3	6.3	6.4	q7.2j	8.1	q9.2	9.1	9.7	9.2	9.1	8.6	8.5	7.9	7.8	7.6	6.6	6.0	5.5	7.1
18	5.5	5.7	5.3	4.6	3.8	3.4	4.6	6.0	6.7	7.2	7.8	8.7	9.1	9.5	9.5	9.3	9.4	9.0	9.0	8.5	7.9	6.6	6.3	6.1	7.1
19	5.3	5.1	4.6	4.5	4.4	4.3	5.2	6.7	7.7	7.8	8.1	8.8	9.6	10.0	10.2	10.1	10.2	10.2	9.2	8.7	7.1	7.2	7.0	7.0	7.5
20	6.2	5.9	5.6	4.8	4.1	3.7	4.2	5.1	5.8	6.7	7.3	7.6	7.8	8.4	9.0	9.0	8.7	8.1	7.9	7.2	p6.4a	6.7	6.6	6.3	6.6
21	6.2	5.3	4.3	3.8	3.9	4.1	3.8	4.7	5.5	6.5	9.0	8.5	10.4	8.7	9.1	8.7	8.4	8.5	7.6	6.8	5.8	5.4	5.4	5.6	6.5
22	5.8	5.6	5.1	4.2	2.7	2.6	4.2	6.2	8.3	9.4	10.1	10.1	9.5	9.3	10.2	9.2	7.3	6.5	6.7	6.8	6.7	6.6	6.3	5.9	6.9
23	5.5	4.9	4.2	3.7	3.5	3.3	4.4	6.1	7.0	8.2	8.6	9.4	10.3	10.6	10.4	10.1	10.0	8.0	7.4	7.0	7.2	6.1	6.2	6.1	7.0
24	5.4	5.1	4.5	4.1	4.1	4.1	5.0	6.4	7.1	8.1	9.3	10.0	10.3	10.0	9.3	8.8	8.3	8.0	7.4	7.2	6.8	6.3	5.8	5.6	7.0
25	5.2	4.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.2	6.8	6.2	5.3	5.2	5.1	...
26	5.1	4.9	4.3	4.1	4.1	4.0	4.1	5.1	5.5	6.0	6.8	7.0	7.2	7.5	7.7	8.3	8.5	8.2	7.8	7.1	7.1	6.0	5.6	5.4	6.1
27	5.3	5.1	4.6	4.5	4.3	4.2	4.8	6.0	6.1	6.8	7.4	8.3	9.2	9.2	8.7	8.6	8.8	8.4	8.0	q7.5j	7.3	6.5	6.4	6.1	6.8
28	5.9	5.8	5.3	5.2	4.5	4.3	5.0	6.5	7.2	8.1	8.9	9.0	9.5	...c	9.6	9.4	9.4	9.1	8.9	8.8	7.9	6.6	6.2	6.0	...
29																									
30																									
31																									
MEAN*	5.9	5.4	4.9	4.4	4.0	3.6	4.4	5.6	6.4	7.1	7.8	8.2	8.7	8.8	8.9	8.9	8.5	8.2	7.8	7.5	7.0	6.5	6.2	6.0	6.7

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 372

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1946 MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS FEBRUARY 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	315	295	310	310	315	345	330	325	310	300	240	250	230	260	255	260	...
2	...a	270	...a	...a	270	280	245	240	295	330	330	350	340	330	320	320	310	300	280	245	235	260	265	275	...
3	265	220	230	255	250	300	265	330	310	310	355	330	...b	...b	...b	340	310	250	250	250	255	q270a	280	250	...
4	290	270	230	230	260	295	300	q590	460	425	405	320	400	385	...b	330	330	295	250	250	240	260	270	280	...
5	260	250	215	260	250	285	285	230	q470k	530	485	430	395	360	350	...b	330	255	240	250	240	270	255	...a	...
6	...a	...a	...a	...a	...a	...a	270	245	q590	375	...a	...a	305	...b	300	330	300	250	250	245	220	q270a	275	290	...
7	250	270	235	250	275	300	280	270	300	295	335	350	335	320	...b	315	330	305	240	250	315	395	315	290	...
8	230	370	350	375	370	370	340	300	...b	...b	...b	...g	...g	...g	...b	...g	...k	q810k	275	300	q310a	280	290	310	...
9	290	275	240	270	225	270	245	230	260	295	300	330	315	...a	...a	300	300	...a	260	240	215	245	270	275	...
10	255	...a	...a	...a	q250a	220	270	240	345	360	365	350	360	355	325	315	280	260	230	235	240	240	270	295	...
11	270	265	240	230	245	245	280	240	365	415	325	390	325	335	310	315	300	230	250	240	230	255	260	260	284
12	260	270	260	285	q290a	240	250	230	255	295	325	305	335	315	p310c	315	290	275	230	230	230	245	q250a	280	273
13	275	290	250	250	230	255	265	235	250	390	p385b	330	330	p345b	335	320	325	240	270	250	235	265	290	p260a	286
14	240	220	230	240	230	250	270	250	260	275	300	280	315	320	300	300	320	325	235	240	230	240	250	250	265
15	295	270	300	265	280	280	275	235	390	425	345	515	p490c	450	405	335	335	215	230	...a	...a	245	260	265	...
16	...a	...a	...a	...a	...a	...a	...a	220	445	395	p310a	325	330	325	330	...a	...a	...a	...a	...a	...a	...a	...a	...a	...
17	...a	...a	230	...a	...a	...a	240	220	220	340	340	280	325	310	320	310	290	280	q250	235	q230	...a	...a	...a	...
18	...a	...a	240	...a	235	250	220	220	225	280	310	310	320	300	305	305	285	260	240	235	215	230	245	230	...
19	235	240	q260	270	260	p280a	230	...a	240	275	315	310	310	320	300	285	295	230	240	225	230	250	255	p270a	...
20	300	...a	245	260	270	325	285	245	...a	310	320	335	335	345	320	290	280	200	250	...a	...a	...a	q280	q285	...
21	...a	240	...a	275	...a	240	250	210	220	370	315	380	290	330	320	300	330	280	245	230	250	285	275	290	...
22	270	270	...a	...a	...a	...a	280	240	290	295	280	290	295	300	285	270	270	p250a	250	240	250	250	p255a	260	...
23	...a	...a	...a	...a	...a	...a	230	235	220	280	310	325	300	295	305	310	270	240	240	225	240	245	265	260	...
24	270	245	260	270	280	...a	250	230	230	290	315	310	300	290	295	305	265	235	240	225	235	240	250	245	...
25	245	245	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	230	...a	...a	250	275	280	...
26	265	280	...a	290	270	...a	260	230	275	400	320	350	340	340	330	320	280	235	235	230	235	220	255	270	...
27	260	230	250	260	260	260	260	250	235	330	330	330	315	300	320	310	285	235	250	225	220	230	250	260	269
28	270	255	250	250	260	245	240	225	220	280	300	290	300	325	300	315	290	230	240	230	210	230	240	260	261
29																									
30																									
31																									
MEAN*	265	262	251	266	263	273	263	242	296	341	333	337	333	332	319	312	300	253	246	241	239	257	265	270	282

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 373

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	4.4	4.7	4.9	4.8	5.1	5.2	5.0	4.8	4.7	...	...
2	...	...	4.6	5.0	5.1	5.0	5.1	5.1	5.0	5.0	4.8	...	...
3	...	...	4.5	4.8	5.2	5.2	...b	...b	...b	...b	...b	...	...
4	...	...	4.3	4.6	4.7	5.0	5.2	5.1	...b	4.8	4.8	...	...
5	...	...	4.5	4.8	5.0	5.0	5.1	q5.2	5.2	...b	5.0	...	...
6	...	...	4.3	4.9	...a	...a	5.3	...b	5.4	...b	4.9	...	...
7	...	...	...a	...a	5.4	5.5	q5.6b	5.4	...b	q5.4h	5.1	...	...
8	...	...	...b	...b	...b	4.4	4.5	4.6	...b	4.5	4.2	...	...
9	...	...	4.5	5.2	5.4	5.5	5.6	...a	...a	...a	...a	...	...
10	...	...	4.8	5.0	5.1	5.2	5.2	5.4	5.2	5.0	4.9	...	...
11	...	...	4.5	4.9	4.9	5.2	5.1	5.4	5.3	5.2	4.8	...	...
12	...	...	3.9	5.1	5.5	5.3	5.5	5.4	5.3	5.0	5.0	...	...
13	...	...	...	4.9	4.9	5.2	5.2	p5.2b	5.3	5.1	4.9	...	...
14	...	...	...	5.0	p5.0a	q5.0	5.4	q5.2	5.3	5.2	4.9	...	...
15	...	...	4.4	4.5	4.9	4.8	5.1	4.9	4.8	4.8	4.7	...	...
16	...	...	4.3	4.6	...a	...a	5.4	5.2	5.3	...a	...a	...	...
17	...	...	...	q5.3	5.1	5.1	5.2	5.1	5.1	4.8	4.6	...	...
18	...	...	...	4.7	4.9	5.0	5.1	5.0	5.1	4.9	4.6	...	...
19	...	...	4.2	4.7	5.0	5.0	5.0	5.1	5.0	4.7	4.6	...	...
20	...	...	...	...a	4.9	4.9	5.0	5.0	4.9	p4.7a	4.5	...	...
21	...	...	...	4.6	4.6	4.9	5.0	4.9	4.8	4.8	4.8	...	...
22	...	...	4.6	4.9	5.0	5.0	5.3	5.1	5.0	4.9	q4.7	...	...
23	...	...	...	4.8	5.1	5.1	5.0	5.0	5.1	5.0	4.6	...	...
24	...	...	...	4.8	5.0	5.1	5.1	5.1	5.0	5.1	4.5	...	...
25	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
26	...	...	...	4.9	5.0	5.3	5.2	5.1	5.1	5.0	4.8	...	...
27	...	...	...	5.0	5.4	5.4	5.3	5.1	5.4	5.2	5.0	...	...
28	...	...	...	5.2	5.2	5.2	5.4	5.4	5.5	5.4	4.9	...	...
29													
30													
31													
* MEAN	...	...	4.4	4.9	5.1	5.1	5.2	5.1	5.2	5.0	4.8	...	...

MINIMUM VIRTUAL HEIGHT OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	210	220	230	200	200	180	230	220	230	...	...
2	...	...	225	230	205	200	215	220	230	245	210	...	...
3	...	...	240	230	220	210	...b	...b	...b	...b	...b	...	...
4	...	...	...a	220	215	200	195	220	...b	235	220	...	...
5	...	...	235	260	220	...a	...a	...a	...a	...b	260	...	...
6	...	...	...a	...a	...a	...a	...a	...b	...a	...b	...a	...	...
7	...	...	...a	...a	...a	205	...b	250	...b	...h	q270h	...	...
8	...	...	...b	...b	...b	...b	q250	q250	...b	...a	260	...	...
9	...	...	225	...a	...a	220	...a	...a	...a	...a	...a	...	...
10	...	...	240	225	220	230	220	210	210	235	q220h	...	...
11	...	...	250	235	...a	...a	220	...a	...a	240	...a	...	...
12	...	...	215	230	q220h	225	210	230	240	...a	q255	...	...
13	...	...	...	...a	...a	...a	...b	...b	220	220	245	...	...
14	...	...	...	255	...a	...a	215	...a	...a	225	230	...	...
15	...	...	220	215	210	200	...a	220	240	230	230	...	...
16	...	...	225	...a	...a	...a	220	...a	...a	...a	...a	...	...
17	...	...	...	215	230	...a	225	...a	...a	...a	...a	...	...
18	...	...	...	215	200	280	230	210	200	225	215	...	...
19	...	...	220	225	215	215	...a	...a	235	...a	230	...	...
20	...	...	...	...a	...a	...a	...a	...a	...a	...a	...a	...	...
21	...	...	...	...a	215	...a	250	230	230	230	...a	...	...
22	...	...	...a	...a	...a	...a	...a	200	p200a	200	...a	...	...
23	...	...	...	...a	215	220	210	195	205	220	240	...	...
24	...	...	...	210	...a	...a	...a	...a	215	200	215	...	...
25	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
26	...	...	...	210	215	210	q210	220	230	220	220	...	...
27	...	...	...	220	q210	230	220	225	225	p225a	225	...	...
28	...	...	...	220	210	210	...a	210	210	225	225	...	...
29													
30													
31													
* MEAN	...	...	228	226	216	217	219	219	222	224	233	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f°F2 EQUAL TO OR LESS THAN f°F1   h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 374

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

FEBRUARY 1946 FEBRUARY 1946

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...c	...c	0.7	0.8	0.9	0.9	...b	...b	...b	0.8	0.7	0.8	0.6
2	0.6	0.7	0.7	0.8	0.9	1.1	1.0	1.1	1.0	1.1	1.7	...b	...b
3	...e	0.7	0.7	0.9	1.0	1.1	...b	...b	...b	...b	...b	...b	0.9
4	0.6	0.7	1.2	1.7	1.1	1.1	0.9	1.1	...b	...b	1.7	1.1	q0.7
5	0.7	0.7	0.6	1.3	1.3	1.1	1.1	q2.3	q2.2	...b	1.2	0.8	...e
6	0.7	0.7	0.9	0.9	1.1	1.1	q2.2	...b	...b	...b	1.4	1.3	0.6
7	0.8	1.3	1.3	1.9	q2.3	q2.3	...b	q2.3	...b	1.8	0.9	0.9	0.9
8	0.8	0.9	...b	...b	...b	...b	1.1	1.0	...b	q2.9	1.1	1.7	0.8
9	0.7	0.9	0.9	0.9	1.1	q1.2	1.1	1.1	1.1	1.1	0.9	0.7	0.7
10	0.6	0.8	0.8	0.9	0.9	1.1	1.1	1.8	1.8	1.1	0.8	0.8	0.7
11	0.7	0.8	q2.6	1.8	q2.1	q2.1	1.8	1.8	1.8	0.9	0.9	0.8	0.7
12	0.8	0.8	0.9	1.1	0.9	q2.7	1.1	1.8	1.8	1.8	q2.7	0.9	0.8
13	0.7	0.9	0.9	0.9	q3.8	q2.7	q2.0	...b	1.1	q2.3	1.1	0.8	0.8
14	0.7	0.8	0.8	0.9	1.7	1.6	q2.7	1.7	1.7	0.9	0.9	0.8	0.8
15	0.8	0.7	1.2	1.1	1.7	1.7	1.7	1.8	0.9	0.9	0.8	0.8	0.6
16	...	0.7	0.8	p0.8c	0.9	1.1	1.1	0.9	0.9	0.9	0.9	0.7	...
17	...	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1	0.9	0.8	0.8	...
18	0.5	0.7	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.7	...
19	...	...	0.7	0.7	0.7	0.9	0.8	1.1	0.9	0.9	0.9	0.7	...
20	...	0.7	0.7	0.7	0.9	1.1	0.8	0.9	0.9	0.8	0.9	0.7	...
21	...	0.7	0.7	0.7	0.9	0.9	0.9	1.0	1.1	0.9	0.8	0.7	...
22	...	...	0.8	0.7	0.8	0.9	1.1	1.1	0.9	1.1	0.7	0.7	...
23	...	0.6	0.7	0.7	0.9	1.1	0.9	0.9	0.9	1.1	0.7	0.7	...
24	...	0.7	0.7	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.8	...
25	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
26	...	0.7	0.8	1.2	...c	1.8	1.1	0.9	1.1	1.2	1.0	0.7	...
27	...	0.7	1.3	1.1	1.1	1.3	1.3	1.2	1.3	1.7	0.9	0.8	...
28	...	...	1.5	...c	1.7	1.3	1.3	1.8	q2.7b	1.2	1.2	1.1	...
29													
30													
31													
* MEAN	0.7	0.8	0.9	1.0	1.1	1.2	1.1	1.2	1.2	1.1	1.0	0.9	0.8

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...c	...c	3.1	3.4	3.5	...a	...b	...a	...a	...a	3.4	3.1	2.5
2	2.0	2.7	3.1	3.4	3.5	...a	3.4	3.8	3.8	3.8	3.4	...b	...b
3	q1.3	2.7	3.2	q3.5	...a	3.8	...b	...b	...b	...b	...b	3.4	2.8
4	1.7	2.5	3.0	3.2	...e	...a	...a	3.8	...b	q3.4	q3.4	3.1	2.4
5	1.8	2.7	3.1	3.5	...c	q3.7	...c	...c	...a	...b	...c	3.1	...a
6	q1.7	2.7	3.2	3.5	3.6	3.5	...a	...b	...b	...b	3.5	3.2	2.4
7	2.1	3.0	3.4	3.7	3.9	q3.9	...b	4.0	...b	3.8	3.4	3.2	2.5
8	1.6	2.4	...b	...b	...b	...b	q3.4	3.8	...b	q3.9	q3.4	3.1	2.6
9	2.1	2.8	3.3	3.6	3.7	3.9	3.9	3.7	3.5	...a	...a	...a	...a
10	1.8	2.7	3.1	3.5	3.7	3.7	3.9	3.9	3.7	3.6	3.3	3.0	2.4
11	1.8	2.7	p3.1a	3.4	3.8	3.9	4.0	3.9	3.9	3.6	3.4	3.0	2.5
12	1.6	2.5	3.1	p3.4c	q3.6	q3.9	3.9	3.8	3.9	3.8	3.6	3.1	...a
13	...a	2.7	3.1	3.4	...b	...a	q3.6	p3.7b	3.7	p3.5b	3.1	3.0	2.5
14	1.4	1.6	3.0	3.4	3.6	3.8	q3.9	4.0	3.8	3.6	3.3	3.0	2.3
15	q1.5	2.6	2.8	3.2	3.2	3.5	p3.6a	3.6	3.4	3.6	p3.4a	2.9	2.2
16	...	q1.7	p2.6a	3.3	3.6	3.6	3.6	3.7	3.5	3.6	3.4	3.0	...
17	...	2.5	3.0	3.2	3.5	3.6	3.6	q3.5	3.5	3.3	3.2	2.8	...
18	q1.8	2.4	2.8	3.0	3.1	p3.5a	3.7	3.7	3.6	3.5	3.2	2.7	...
19	...	...	...a	3.4	3.2	3.6	3.6	3.6	3.5	p3.4a	3.1	2.6	...
20	...	2.2	2.7	3.1	3.3	3.3	p3.5a	3.4	3.5	3.4	3.2	2.8	...
21	...	2.3	2.8	3.1	3.2	3.5	3.8	3.6	3.6	3.4	3.1	2.6	...
22	...	...	2.8	3.1	3.4	3.4	3.6	3.5	3.4	3.4	p3.2a	2.7	...
23	...	2.5	2.8	p3.1a	3.3	3.5	3.6	3.4	3.3	3.1	3.1	2.8	...
24	...	2.6	2.9	3.2	3.4	3.5	3.6	...a	...a	3.4	3.2	2.8	...
25	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
26	...	q2.5	3.0	...c	3.6	q3.8	q4.0	...a	3.7	3.6	3.3	...a	...
27	...	2.7	3.2	3.4	q3.8	3.8	3.8	3.8	3.8	3.7	3.4	3.1	...
28	...	...	3.1	3.4	...c	...a	3.7	3.8	3.9	3.7	3.4	2.9	...
29													
30													
31													
* MEAN	1.7	2.5	3.0	3.3	3.5	3.6	3.7	3.7	3.6	3.6	3.3	3.0	2.5

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 375

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1946 CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND MARCH 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.9	5.5	5.2	5.0	4.9	4.7	5.4	6.7	7.5	8.5	9.3	9.6	10.0	11.0	11.0	11.3	9.7	8.7	8.8	8.3	8.4	7.8	7.0	6.9	7.4
2	6.0	5.6	5.4	5.1	4.4	4.2	4.1	4.8	5.3	5.5	5.5	5.8	5.6	5.8	5.4	5.9	5.6	5.9	6.8	5.6	5.5	4.9	4.5	4.3	5.3
3	4.4	4.4	4.5	4.2	3.7	3.6	5.0	7.1	8.0	8.4	9.2	9.5	9.7	9.8	9.6	9.0	8.7	8.2	8.3	8.0	7.5	6.7	6.1	5.7	7.0
4	5.5	5.5	4.9	5.6	4.7	4.4	5.1	7.2	8.4	9.1	9.8	10.7	11.5	11.2	11.2	10.6	10.1	9.4	9.1	8.7	8.1	7.4	6.5	6.7	8.0
5	5.7	5.3	5.2	5.1	5.0	4.3	4.8	6.4	6.1	6.7	...a	...a	5.9	6.1	6.0	5.8	6.0	5.9	5.7	5.5	5.2	5.0	4.9	4.8	...
6	4.6	4.9	4.2	3.6	q3.5f	3.5	4.0	5.4	6.4	7.7	q8.7j	9.6	9.5	10.0	10.1	9.5	8.6	8.5	q8.6j	8.0	7.2	7.0	7.0	6.6	7.0
7	6.0	5.6	5.3	5.1	4.6	4.6	5.0	6.4	q7.2	7.6	p8.7c	q9.7c	10.1	10.3	10.3	10.0	9.0	9.0	8.4	7.8	7.3	7.3	q6.7j	6.6	7.4
8	6.3	5.7	5.2	4.9	4.7	4.7	5.5	7.2	8.2	8.9	9.8	10.4	10.6	10.4	10.0	10.0	9.7	9.2	9.4	8.8	7.6	7.0	6.6	6.2	7.8
9	6.0	5.9	5.8	5.6	5.1	4.9	5.6	7.2	8.7	9.0	9.5	9.7	10.5	10.5	10.8	10.8	10.5	9.8	9.5	9.2	8.0	7.4	6.8	6.3	8.0
10	6.0	5.7	5.6	5.6	5.4	5.1	5.3	6.7	7.9	9.5	9.5	10.5	9.9	11.2	11.0	10.9	10.5	10.7	9.8	9.5	8.7	7.4	6.2	5.9	8.1
11	5.9	5.5	5.4	5.0	4.3	4.0	4.4	q5.6	q8.2j	8.2	8.6	9.5	11.5	11.1	11.2	11.2	10.7	10.6	9.1	8.7	6.7	6.0	5.5	5.3	7.6
12	5.3	4.9	4.7	4.4	3.6	3.5	3.9	5.3	6.0	7.3	7.3	7.7	8.8	9.3	9.0	...c	...c	...c	9.0	7.9	6.9	6.0	5.4	5.3	...
13	5.0	4.9	4.9	4.7	4.5	4.0	5.0	7.2	8.3	8.9	9.9	10.4	10.9	10.7	10.8	11.0	10.7	10.6	10.2	8.5	7.0	6.6	6.0	6.0	7.8
14	5.6	5.4	5.3	5.0	4.8	4.8	5.5	7.9	9.4	9.9	10.1	11.2	11.4	11.3	11.5	11.6	11.3	10.9	10.4	8.9	8.0	7.4	6.6	6.5	8.4
15	6.0	5.9	6.0	5.6	5.1	4.8	5.4	7.7	9.2	9.7	10.1	11.0	11.7	11.5	10.9	11.1	10.9	10.3	9.7	9.3	7.0	7.0	6.6	6.8	8.3
16	6.7	6.3	5.6	4.4	3.9	3.9	4.1	5.8	6.6	7.5	9.0	9.8	9.8	10.4	10.2	10.5	10.3	9.7	9.5	8.0	7.0	6.3	5.8	5.5	7.4
17	5.4	5.0	5.0	4.6	4.1	3.5	4.2	6.0	7.5	8.6	9.0	9.6	10.4	11.2	11.4	11.2	11.0	10.4	10.2	9.2	7.5	7.0	6.8	6.3	7.7
18	6.4	6.1	5.6	4.9	4.4	4.4	4.9	6.7	7.2	8.4	8.6	9.2	9.4	10.0	10.1	10.0	9.9	9.5	9.0	8.0	7.2	6.7	6.4	5.5	7.4
19	5.2	5.3	5.2	4.9	4.9	4.7	5.0	6.0	6.7	7.6	9.1	10.0	11.0	11.2	11.3	11.4	10.5	10.0	9.5	8.4	7.5	7.0	6.1	5.6	7.7
20	5.3	5.3	5.4	5.0	4.6	4.2	4.5	7.0	7.3	8.5	9.4	10.4	11.6	11.8	11.4	11.5	11.1	10.8	10.4	9.3	7.6	6.7	6.1	5.8	8.0
21	5.7	5.5	5.5	5.5	4.7	4.6	5.0	6.9	7.5	8.5	9.4	10.4	q11.0	11.5	11.8	11.7	11.5	11.3	10.8	9.2	7.8	7.3	6.5	5.8	8.1
22	5.5	5.3	5.2	4.9	4.5	4.3	4.8	7.4	8.3	8.8	9.2	10.5	11.3	11.5	11.7	11.8	10.8	10.7	10.5	9.5	8.5	6.1	5.9	5.8	8.0
23	5.5	5.5	5.5	5.2	5.0	4.8	5.1	7.8	8.5	8.2	9.5	10.7	11.8	11.9	11.1	10.8	10.5	10.2	9.7	8.5	7.1	6.5	5.7	5.2	7.9
24	5.0	4.8	5.0	4.8	4.5	4.4	4.6	6.6	6.3	6.7	7.5	q7.2j	7.2	7.5	8.0	7.5	7.2	7.2	7.1	7.0	7.1	7.1	6.8	6.3	6.4
25	6.3	5.5	5.4	5.2	3.9	3.1	4.2	8.2	10.4	...c	...c	...c	...c	12.6	q12.7	12.6	11.7	11.2	10.2	10.2	9.0	q7.6j	5.7	6.1	...
26	q4.8f	5.3	3.8	q3.4	3.2	1.8	2.5	3.2	q3.8a	...g	...a	...a	...a	...a	...a	5.0	5.2	5.7	5.0	4.6	4.0	3.9	3.5	3.4	...
27	3.4	3.3	2.9	2.5	2.3	2.0	3.0	4.5	5.5	6.2	7.3	8.5	9.3	9.5	9.3	8.4	8.1	7.8	7.5	6.9	6.2	5.3	4.7	4.5	5.8
28	4.7	4.9	4.5	3.7	3.1	2.7	3.7	7.0	8.9	10.4	11.3	10.4	11.8	11.8	11.3	11.0	9.3	q5.7	6.7	8.7	8.3	...g	...g	...g	...
29	...g	...g	1.6	1.8	1.8	1.5	2.4	3.8	4.5	5.1	5.5	...g	6.3	6.3	6.6	6.5	7.0	6.2	6.2	6.0	6.5	6.1	6.0	5.6	...
30	5.3	5.4	4.8	4.2	3.6	3.2	3.1	5.9	7.5	8.1	8.1	8.0	8.5	8.9	8.5	8.5	8.5	8.5	8.1	6.6	5.6	5.5	5.2	5.1	6.4
31	5.0	4.8	4.5	3.9	3.2	3.1	3.7	6.4	8.1	9.5	8.6	8.9	9.4	9.5	9.7	9.9	10.1	10.0	9.0	7.8	6.8	6.1	5.7	5.6	7.0
MEAN*	5.5	5.3	4.9	4.6	4.2	3.9	4.5	6.4	7.4	8.2	8.8	9.6	9.9	10.2	10.1	9.9	9.5	9.1	8.8	8.1	7.2	6.5	6.0	5.7	7.2

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 376

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1946 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MARCH 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	245	245	260	245	240	240	235	240	300	295	310	360	365	350	300	230	250	260	235	245	240	250	240	268
2	245	245	255	260	265	270	320	250	q485k	q470k	q500k	q515k	q600k	q490k	...k	q455k	240	250	260	250	245	250	285	295	...
3	p290a	285	270	240	p260a	260	240	245	240	270	315	315	320	340	315	310	300	230	260	240	230	230	245	250	271
4	275	p270a	280	255	q270	250	260	230	230	230	290	285	300	310	315	305	...a	...a	...a	...a	...a	...a	...a	250	...
5	270	255	270	265	260	260	275	270	p280a	330	...a	...a	515	470	500	525	425	240	...a	...a	290	300	310	...a	...
6	...a	...a	...a	...a	...a	...a	310	250	240	315	295	320	335	325	310	300	230	250	250	240	235	280	270	250	...
7	245	250	...a	250	260	285	270	245	240	315	p315c	q305c	q320	305	q300	295	p230a	240	255	240	255	270	285	q270	...
8	p270a	270	270	275	270	250	245	225	240	230	295	300	280	280	270h	300	230	240	250	235	225	250	255	260	259
9	270	270	260	245	255	260	260	245	250	215	260	275	310	315	300	290	270	235	240	220	235	250	245	270	260
10	290	280	285	250	250	250	265	250	225	270	285	320	420	325	340	275	310	260	260	240	240	230	260	270	277
11	295	300	260	p255a	290	300	300	240	230	300	300	300	290	290	280	270	270	250	240	230	220	250	270	275	271
12	270	275	p275a	255	p280a	300	300	250	215	290	300	300	325	310	...c	...c	...c	...c	235	225	220	235	255	265	...
13	280	275	275	250	245	250	260	240	230	265	270	300	280	300	320	285	240	265	230	200	215	240	250	260	259
14	245	260	p270a	260	p260a	260	255	235	240	265	265	290	285	270	290	280	240	250	235	205	245	220	240	255	255
15	255	p250a	255	230	p240a	250	260	235	225	225	280	290	285	280	280	280	255	240	245	220	200	255	255	250	252
16	240	230	240	220	245	250	265	250	290	290	290	275	275	245	280	280	225	230	235	210	230	235	250	p255a	251
17	260	250	255	235	220	230	240	230	230	270	280	280	p300b	295	295	290	270	230	240	210	230	250	250	265	254
18	245	235	235	230	250	270	275	240	270	275	280	280	280	300	290	275	225	215	235	220	220	250	230	230	252
19	245	260	260	230	235	240	235	235	235	270	290	290	285	275	300	285	225	240	230	q235	220	230	230	240	251
20	255	260	245	230	225	220	255	235	250	260	275	280	q305	300	285	280	280	250	230	220	220	225	240	240	253
21	275	250	250	230	225	250	250	230	230	290	285	285	280	300	300	280	240	240	230	210	220	235	230	240	252
22	265	265	250	250	250	250	250	235	220	260	255	275	280	290	290	275	255	p240a	225	210	205	p235a	260	p270a	252
23	275	285	260	230	255	235	270	240	225	250	270	290	300	290	280	265	275	240	230	220	235	230	225	255	255
24	270	...a	...a	...a	...a	290	245	240	235	420	425	490	500	425	330	330	230	260	250	285	290	270	260	265	...
25	290	340	300	235	245	290	255	260	240	...c	...c	...c	...c	230	250	235	240	250	230	275	255	220	320	...a	...
26	...a	350	390	420	430	380	340	300	...a	...g	...a	...a	...a	...a	...a	...	...	270	275	230	255	...a	...a	...a	...
27	290	280	275	290	300	320	340	270	...k	375	335	325	p330b	300	290	280	240	250	240	230	240	235	275	275	...
28	300	250	230	240	240	280	265	240	235	270	260	270	300	290	280	260	230	275	320	350	260	...g	...g	...g	...
29	...g	...g	...	485	420	320	390	250	250	340	430	...g	400	425	370	345	290	p250a	260	240	260	240	270	260	...
30	275	285	270	250	270	265	260	235	225	260	270	290	305	295	295	290	275	240	230	215	240	255	260	260	263
31	265	250	245	230	245	265	260	240	235	250	260	295	285	290	310	285	265	235	220	215	220	p235a	245	260	254
MEAN*	268	269	266	261	266	268	273	244	248	289	302	309	333	318	308	301	258	245	245	233	237	244	258	258	271

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 377

MARCH 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1946

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	5.4	5.3	5.3	5.4	5.6	5.4	5.0	...	...	...
2	...	...	4.3	4.5	4.7	4.9	5.0	5.0	4.9	4.8	...	...	...
3	...	...	...	4.8	4.9	5.5	5.7	5.7	5.5	5.5	5.0	...	...
4	...	...	...	...	5.4	5.4	5.6	5.6	5.5	5.3	...	...	...
5	...	...	...	4.8	...a	...a	5.1	5.0	5.0	4.9	4.7	...	...
6	...	...	...	5.0	5.2	5.5	6.0	q6.0	5.4	5.3	...	...	...
7	...	...	...	5.3	p5.5c	q5.5c	q5.4	q5.9	4.7	5.2	...	...	...
8	...	...	...	5.0	5.5	5.5	q5.3h	5.0	4.6	5.1	...	...	...
9	...	...	...	...	4.9	5.2	5.5	5.6	5.5	5.2	4.8	...	...
10	...	...	...	4.2	5.2	5.5	5.8	5.6	5.8	4.7	5.0	...	...
11	...	...	...	5.0	4.9	5.5	5.5	5.3	5.1	5.0	...	...	...
12	...	...	...	4.8	5.2	5.5	5.5	5.4	...c	...c	...	...	...
13	...	...	...	4.8	4.9	5.4	5.2	5.4	5.5	5.0	...	...	...
14	...	...	...	5.0	5.2	5.7	5.4	5.2	5.0	5.2	...	...	...
15	...	...	...	...	5.1	5.4	5.3	5.0	5.1	4.4	...	...	...
16	...	...	...	4.7	4.8	4.9	4.8	4.7	4.8	4.9	...	...	...
17	...	...	...	5.0	5.0	5.0	p4.9b	5.2	5.0	5.0	4.4	...	...
18	...	...	4.2	4.6	4.9	5.2	4.8	5.1	5.0	4.8	...	...	...
19	...	...	...	4.8	5.3	5.3	5.6	5.2	5.4	5.3	...	...	...
20	...	...	4.2	4.8	4.8	5.0	q5.4	5.0	5.0	4.6	4.8	...	...
21	...	...	...	4.8	4.9	p5.2c	5.3	5.1	5.5	4.9	...	...	...
22	...	...	...	4.8	4.8	5.4	5.3	5.2	5.5	5.0	...	...	...
23	...	...	...	4.3	4.7	5.1	5.4	5.4	4.9	4.8	4.8	...	...
24	...	...	...	5.0	5.1	5.0	4.9	5.0	4.9	5.1	...	...	...
25	...	...	...	...c	...c	...c	...c	...	4.7	...	...	...	...
26	...	...	...	4.0	...a	...a	...a	...a	...a	4.6	4.4	...	...
27	...	...	5.3	4.8	5.0	5.0	...b	5.3	5.1	4.6	...	...	...
28	...	...	...	4.6	4.8	4.8	5.3	p5.6a	5.3	4.5	...	...	...
29	...	...	...	4.2	4.7	5.5	5.0	5.2	4.8	5.0	4.2	...	...
30	...	...	...	4.7	4.9	5.2	5.3	5.3	5.0	5.2	4.7	...	...
31	...	...	...	4.7	5.0	5.2	5.4	5.3	5.6	5.3	4.3	...	...
* MEAN	...	...	4.5	4.8	5.0	5.3	5.3	5.3	5.2	5.0	4.6	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	225	230	230	210	p220a	230	230	...	...	...
2	...	...	250	230	190	200	230	230	230	230	...	...	...
3	...	...	...	225	...a	...a	...a	...a	240	220	...a	...	...
4	...	...	...	...	...a	...a	...a	...a	230	225	...	...	...
5	...	...	...	...a	...a	...a	...a	230	230	...a	...a	...	...
6	...	...	...	...a	...a	...a	...a	...a	...a	...a	...	...	...
7	...	...	...	225	p235c	q215c	q220	...a	...a	...a	...	...	...
8	...	...	...	q225h	235	215	q250h	200	210	215	...	...	...
9	...	...	...	...	210	210	220	220	...a	...a	245	...	...
10	...	...	...	210	235	220	260	235	220	225	230	...	...
11	...	...	...	220	215	p205a	215	230	235	230	...	...	...
12	...	...	...	220h	215	220	220	220	...c	...c	...	...	...
13	...	...	...	225	210	200	200h	230	225	230	...	...	...
14	...	...	...	220	210	200	230	215	220	225	...	...	...
15	...	...	...	...	210	205	230	215	215	215	...	...	...
16	...	...	220	220	230	200	200	210	225	220	...	...	...
17	...	...	...	210	200	200	...b	220	225	225	...	...	...
18	...	...	...	220	215	200	210	220	235	210	...	...	...
19	...	...	...	225	225	220	235	230	220	...c	...	...	...
20	...	...	220	230	235	220	q225	220	220	240	240	...	...
21	...	...	...	230	...a	...c	...c	225	230	...a	...	...	...
22	...	...	...	220	210	190	190h	239	p225a	225	...	...	...
23	...	...	...	200	200	205	190	230	225	230	220	...	...
24	...	...	...	220	210	230	240	255	225	230	...	...	...
25	...	...	...	...c	...c	...c	...c	...	225	...	...	...	...
26	...	...	...	...a	...a	...a	...a	...a	...a	...a	235	...	...
27	...	...	230	240	...a	...a	...b	...a	...a	240	...	...	...
28	...	...	...	220	220	210	210	p205a	225	225	...	...	...
29	...	...	...	220	250h	240	260	230	220	240	230	...	...
30	...	...	...	215	205	200	190	210	220	215	230	...	...
31	...	...	...	215	210	195	190h	215	...b	230	230	...	...
* MEAN	...	...	230	221	218	214	219	222	225	226	232	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 378

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MARCH 1946 MARCH 1946

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY													CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.7	1.2	2.1	1.3	1.3	1.7	1.4	1.2	1.0	0.7	...	...	2.5	3.0	3.4	3.6	q3.8	q3.7	3.5	3.8	3.6	3.5	2.9	...
2	...	0.7	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.0	0.7	...	...	q2.6	3.1	3.8	3.8	p3.8a	3.7	3.9	3.8	3.6	3.4	3.0	...
3	...	0.7	1.2	1.2	1.3	1.3	2.8	1.3	1.3	1.3	1.0	0.9	...	...	2.6	3.1	3.4	3.6	3.8	4.0	4.0	3.9	3.7	3.5	3.0	...
4	...	0.7	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	...	...	2.5	3.1	3.3	q3.6	q3.7	q3.8	...c	q3.8	3.7	3.5	3.0	...
5	...	0.7	1.1	1.2	1.3	1.2	1.3	1.4	1.3	1.3	1.2	0.8	...	...	2.2	2.9	3.2	3.2	3.1	...a	q4.0	...c	3.7	3.4	2.9	...
6	...	0.7	1.0	1.2	1.2	1.3	1.4	1.3	1.3	1.3	1.3	1.1	...	...	2.5	3.0	3.3	...c	...c	...c	...c	...c	q3.6	3.4	2.9	...
7	...	1.1	1.2	1.2	...c	q1.8c	1.7	1.3	1.3	1.2	0.9	0.8	...	...	2.5	3.0	...c	...c	q3.8c	4.0	...a	...a	3.7	p3.4a	2.9	...
8	...	0.7	1.1	0.9	0.9	0.9	0.9	1.2	1.2	1.2	0.9	0.6	...	...	2.6	3.0	3.2	3.6	q3.8	q3.8	3.9	3.8	3.6	3.2	2.8	1.8
9	...	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.6	...	...	2.5	p3.1a	3.3	3.3	...a	...a	3.9	3.8	3.7	3.4	2.9	2.0
10	...	0.6	0.8	0.9	0.9	p1.1c	1.3	1.2	0.9	0.9	0.8	0.8	...	...	2.4	3.0	3.2	3.5	p3.7c	3.8	3.6	3.8	3.6	3.2	2.8	1.9
11	...	0.7	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	0.8	0.7	...	...	2.3	3.0	3.3	3.4	3.7	3.8	3.6	3.8	3.5	p3.2a	2.8	...
12	...	...e	0.6	0.7	0.9	0.9	0.9	1.0	...c	...c	...c	...c	...	...	2.4	2.9	3.3	q3.5	3.7	3.8	3.8	...c	...c	...c	...c	...
13	...	0.7	0.7	0.8	0.9	0.9	1.3	0.9	1.2	1.0	0.9	0.7	...	...	2.3	2.9	3.2	3.5	3.6	3.7	3.8	3.7	3.5	3.3	2.7	...
14	...	...e	0.6	0.9	0.9	0.9	1.0	1.1	0.9	0.9	0.9	0.7	...	...	2.4	3.0	3.3	3.5	q3.7	3.9	3.8	3.6	3.5	3.2	2.7	...
15	...	...e	1.0	0.8	1.2	...c	...c	q1.1	...c	1.0	0.9	0.8	...	...	2.2	2.9	3.1	...c	...c	...c	q3.6	3.7	3.5	3.2	2.7	...
16	...	...e	0.6	0.7	0.7	0.7	1.0	0.9	1.1	0.8	0.9	0.6	...	...	2.3	2.8	3.2	3.3	q3.4	...c	...c	...c	q3.4	3.1	2.6	1.7
17	...	0.6	0.7	0.9	0.9	1.0	...b	1.8	1.0	0.8	0.8	0.7	...	...	2.2	2.8	3.1	q3.5	...c	...b	3.8	3.7	3.4	3.2	2.7	...
18	...	...e	0.9	0.9	0.8	0.9	0.9	0.9	0.9	...c	...c	0.6	...	...	2.2	2.8	3.1	q3.3	...c	...c	...c	...c	3.4	3.1	2.5	...
19	...	0.6	0.6	0.9	2.0b	1.1	...c	...c	1.0	1.0	0.8	0.6	...	...	2.2	2.8	3.2	...c	...c	...c	...c	...c	...c	3.1	2.6	1.7
20	...	0.6	1.0	0.9	1.0	1.1	q1.0	1.0	1.0	1.0	0.9	0.6	...	...	2.2	3.0	3.3	3.5	...c	...c	q3.6	3.8	...c	3.1	2.4	...
21	...	0.7	0.7	1.0	1.1	1.1	1.1	1.0	1.9	0.9	0.9	0.6	...	...	2.3	2.8	3.3	p3.4c	3.6	3.7	3.6	3.7	3.3	2.8	2.6	1.5
22	...	...e	1.0	0.7	0.9	1.0	1.5	1.5	0.9	0.9	0.9	0.8	...	...	2.3	2.9	3.2	3.3	3.4	3.6	3.5	3.4	3.6	3.3	2.7	...
23	...	0.7	0.6	0.7	0.9	0.9	0.9	1.2	1.0	1.2	0.8	0.6	...	...	2.1	2.7	3.2	3.4	3.6	3.7	3.8	3.6	3.3	2.9	2.5	...
24	...	0.6	1.4	0.9	0.9	0.9	1.3	1.5	1.3	0.9	0.8	0.8	...	...	2.1	2.7	3.2	q3.4	3.3	3.4	3.5	3.4	3.4	3.1	2.7	...
25	...	0.6	0.9	...c	...c	...c	...c	0.8	0.9	0.9	0.7	0.6	...	...	2.0	2.8	...c	...c	...c	...c	3.6	3.5	3.3	3.1	2.5	...
26	...	0.7	0.8	0.9	0.9	0.9	0.9	0.9	1.3	0.9	0.8	0.6	...	...	...a	...a	...a	...a	3.9	...a	3.5	3.3	3.1	2.7	2.4	...
27	...	...e	0.6	0.8	0.8	0.8	...b	1.7	1.8	0.9	0.9	0.7	...	1.8	2.4	2.9	3.2	3.4	3.5	...b	q3.8b	3.7	3.6	3.0	2.3	...
28	...	0.6	0.8	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.8	...	...	2.2	2.8	3.1	3.3	3.5	3.6	p3.7a	3.6	3.4	3.1	2.4	1.3
29	...	0.7	1.0	1.0	1.0	1.0	0.9	1.0	0.9	0.8	0.9	0.8	...	1.7	2.2	2.8	2.8	3.5	p3.5c	3.4	3.6	3.5	3.3	3.0	2.5	...
30	...	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	...	...	2.4	2.9	3.2	3.5	3.6	3.7	p3.8a	3.6	3.4	3.0	...a	...
31	...	0.6	0.8	0.8	0.9	0.9	0.8	0.9	2.2b	0.9	0.9	0.7	...	...	2.2	2.8	3.0	3.4	3.6	p3.6c	3.6	...b	3.4	3.0	2.4	...
MEAN*	...	0.7	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.0	0.9	0.8	...	...	2.3	2.9	3.2	3.4	3.6	3.7	3.7	3.7	3.5	3.2	2.7	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 379

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1946 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — APRIL 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	5.5	5.3	4.9	3.8	3.3	3.0	3.7	7.3	8.4	10.4	10.5	10.9	11.5	11.5	11.4	11.2	11.0	10.8	10.7	8.7	7.9	6.1	5.3	4.8	7.8
2	4.9	4.8	5.0	4.9	4.3	4.0	4.5	7.3	9.2	p10.6c	10.2	10.0	10.7	11.3	11.1	11.3	11.5	11.0	10.6	9.0	8.5	7.0	5.8	6.0	8.1
3	5.8	6.0	5.8	5.1	4.1	3.6	4.3	7.5	9.3	11.2	q11.4	11.9	11.6	11.4	11.5	p11.6c	11.6	...c	...c	...c	7.2	6.8	5.9	5.7	...
4	5.6	5.6	5.6	5.0	4.8	4.6	5.4	8.0	9.2	10.0	11.0	12.0	11.6	q12.2j	12.3	12.2	12.1	11.1	10.1	8.3	7.0	6.7	6.4	6.3	8.5
5	6.2	5.9	5.6	5.6	4.6	4.4	4.5	7.5	9.5	10.8	11.8	11.7	11.8	12.0	12.2	11.8	11.9	10.9	10.2	8.6	8.0	7.3	6.3	5.5	8.5
6	5.4	5.4	5.3	4.9	4.9	4.8	5.3	7.6	9.6	10.8	11.0	12.4	13.0	13.2	13.0	12.3	12.2	11.2	10.0	8.5	8.0	7.4	6.9	5.8	8.7
7	4.8	4.6	4.5	4.7	4.6	4.2	4.5	7.2	9.7	10.9	12.0	12.4	12.4	12.2	12.8	12.6	12.2	11.3	10.9	8.3	7.5	6.8	6.3	5.7	8.5
8	5.5	5.4	5.7	5.6	4.8	4.7	4.4	7.2	9.6	11.8	11.8	11.3	11.6	12.7	12.7	12.0	11.7	11.3	10.0	9.6	7.6	7.1	6.2	5.5	8.6
9	5.4	5.2	5.2	5.0	4.3	4.1	4.5	7.5	9.7	11.0	11.7	12.8	12.0	12.2	12.2	12.5	12.0	11.2	10.2	8.8	8.4	7.5	8.2	q7.0j	8.7
10	6.5	6.3	6.6	6.6	6.1	5.4	5.2	q7.1j	9.8	q11.6j	11.9	12.0	12.6	11.9	11.4	11.3	11.4	10.9	10.1	7.9	6.8	6.1	5.6	5.2	8.6
11	5.2	5.2	4.7	4.1	3.7	3.8	4.3	8.2	10.0	11.4	11.4	11.1	11.9	12.2	12.0	11.7	11.9	11.2	10.2	8.1	q7.2j	6.5	5.2	5.3	8.2
12	5.4	5.3	4.8	4.3	3.4	3.3	3.7	...c	...c	...c	12.1	q11.4j	11.3	q11.3j	q11.6j	q11.4j	11.2	10.5	9.7	8.0	p7.0c	q6.4	p5.8c	q6.1	...
13	q5.8	5.7	5.5	5.0	3.8	3.5	3.8	q6.6	9.8	q10.5	12.0	12.0	11.7	11.8	12.1	11.9	11.6	11.0	9.5	8.3	q7.4j	q7.4j	6.9	6.6	8.3
14	6.2	6.0	5.7	5.3	q4.2j	4.2	q5.5j	q7.8	9.2	11.6	10.8	11.1	q12.0	p11.9c	q12.0	p11.8c	11.5	10.4	9.0	q6.9j	p6.3c	q6.6	5.8	5.7	8.2
15	5.6	6.0	6.1	q4.7j	4.1	4.1	4.3	6.5	9.6	q11.2j	p10.8c	q11.1j	q11.5	...c	...c	q11.9	10.5	...c	...c	...c	...c	...c	...c	6.0	...
16	6.0	6.4	5.7	4.8	3.8	3.4	3.3	4.8	6.0	q7.2j	8.3	9.6	10.6	10.2	10.3	10.2	9.9	8.6	q8.3j	5.3	4.3	4.3	4.2	4.2	6.6
17	3.9	3.8	3.9	3.7	3.1	2.8	2.9	q5.3j	q7.2j	8.6	9.4	q9.8j	9.7	10.7	q10.6	9.8	...c	...c	...c	...c	...c	...c	...c	...c	...
18	...c	...c	...c	...c	...c	...c	...c	...c	...c	9.0	9.9	q9.8	9.5	10.2	10.0	9.8	10.0	9.0	q7.5j	6.2	5.7	4.8	q4.6f	q4.1f	...
19	q4.8f	q4.4f	q4.2f	q4.1f	4.2	3.8	p4.0c	6.5	8.1	8.9	10.0	10.0	10.1	10.0	9.7	10.4	10.2	9.8	8.1	6.2	5.5	5.1	4.9	4.7	7.0
20	4.5	4.2	3.9	3.9	3.4	3.6	3.7	6.2	p8.0c	9.5	10.4	10.6	10.0	10.1	10.2	10.3	11.3	p10.1c	7.9	q6.6	5.1	4.8	4.6	4.7	7.0
21	4.5	4.2	4.4	4.6	4.1	3.8	4.0	6.3	7.9	9.9	11.0	10.8	9.9	10.1	10.5	10.6	10.2	9.8	8.7	6.0	5.2	4.5	4.8	4.3	7.1
22	4.3	4.4	4.6	4.6	3.8	3.7	3.6	6.2	8.2	9.5	q11.2j	q10.8j	...c	...c	...c	...c	10.3	9.2	7.8	q6.8j	6.5	6.4	6.4	5.9	...
23	5.2	4.9	4.7	4.7	4.6	4.5	4.1	5.8	8.0	q8.4j	10.5	10.5	11.1	11.2	q11.9j	q11.1j	q11.6j	p11.4c	10.5	11.6	9.3	10.0	8.7	8.8	8.5
24	8.5	7.9	q7.4j	p6.7c	5.6	5.4	5.9	p7.2c	q8.4j	q5.2k	...k	q4.6k	q4.4k	...k	4.6	4.3	5.6	5.8	4.7	4.3	3.3	3.3	2.9	2.5	...
25	2.2	1.7	1.3	2.2	2.1	2.3	2.5	3.9	4.6	5.3	6.5	8.4	8.6	10.2	q7.9j	8.5	8.7	7.9	6.6	5.5	5.4	4.3	3.5	3.4	5.2
26	3.5	3.3	3.5	3.4	3.2	3.2	2.8	5.7	8.1	8.4	10.4	11.4	10.3	10.6	10.6	q11.1j	10.4	10.0	q7.7j	5.0	5.0	4.1	3.1	3.0	6.6
27	3.1	...c	...c	...c	...c	...c	...c	...c	...c	9.8	10.6	10.5	12.3	12.3	11.5	10.7	10.4	10.3	9.2	7.3	5.4	4.2	3.6	3.3	...
28	3.2	3.3	3.4	3.4	3.4	3.1	2.9	6.1	8.0	9.0	10.8	11.3	10.3	10.8	11.3	11.6	11.6	9.9	7.1	6.7	5.5	4.7	4.3	3.9	6.9
29	4.0	3.8	3.8	4.0	3.5	3.6	3.2	6.6	8.7	10.2	...c	...c	11.2	11.2	11.3	...c	...c	9.7	8.4	5.8	5.4	5.1	3.7	3.6	...
30	3.2	3.2	3.4	3.6	3.6	3.6	3.4	5.9	7.9	9.0	10.1	10.9	10.1	10.5	10.8	10.9	10.4	10.2	8.5	5.7	4.1	3.7	3.4	3.3	6.6
31																									
MEAN*	5.C	4.9	4.8	4.6	4.0	3.9	4.1	6.7	8.6	9.4	10.7	10.8	10.9	11.3	11.0	11.0	10.9	10.2	9.0	7.3	6.7	5.9	5.3	5.1	7.6

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 380

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1946 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — APRIL 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	250	240	245	225	230	250	260	235	235	260	260	240	275	280	270	235	240	245	225	215	220	p235a	240	...a	...
2	...a	290	...a	...a	q245	245	260	250	245	p265c	265	265	280	290	290	280	250	235	225	210	230	240	240	255	...
3	270	265	230	225	210	260	260	240	240	260	255	265	270	270	280	p260c	240	...c	...c	...c	240	235	250	255	...
4	250	250	250	245	240	265	250	235	235	225	260	270	265	290	290	260	245	230	220	220	230	250	245	250	249
5	245	235	235	230	215	235	230	240	240	230	245	260	260	275	250	250	240	235	230	210	230	225	235	245	239
6	280	290	275	250	270	270	235	220	245	240	230	265	255	250	255	240	230	230	220	235	230	230	230	235	246
7	250	270	280	260	250	245	240	235	230	240	260	260	260	280	285	260	235	235	225	220	240	220	240	250	249
8	270	265	275	240	230	255	250	240	230	250	255	250	270	290	265	255	215	240	225	230	220	220	240	235	246
9	260	250	250	...a	...a	...a	...a	240	245	255	230	265	260	260	280	270	230	235	225	240	...a	290	255	240	...
10	260	295	290	250	240	240	220	235	230	250	250	230	265	230	p240a	240	235	235	220	...a	...a	...a	...a	245	...
11	255	240	235	230	255	270	265	240	235	240	245	245	275	280	265	260	240	230	215	215	225	230	240	270	246
12	240	250	230	200	215	260	240	...c	...c	...c	240	255	250	260	285	260	240	240	220	215	245	240	240	245	...
13	240	240	225	205	220	280	240	245	235	260	250	270	...c	...c	270	275	235	220	220	230	240	250	240	230	...
14	255	215	230	225	p285a	325	270	230	230	245	p230c	250	265	250	270	270	230	240	210	225	250	240	280	295	250
15	p305c	245	230	200	275	270	270	245	240	250	...c	...c	...c	270	270	255	230	...c	...c	...c	...c	...c	...c	...a	...
16	...a	260	...a	...a	270	305	300	260	230	285	285	285	270	270	270	265	230	240	230	220	270	250	265	250	...
17	270	275	265	240	230	245	265	240	240	250	260	265	260	280	275	250	...c	...c	...c	...c	...c	...c	...c	...c	...
18	...c	...c	...c	...c	...c	...c	...c	...c	...c	265	265	250	270	290	280	260	255	240	230	240	225	240	250	240	...
19	240	230	250	240	235	260	250	240	250	255	260	260	270	270	260	265	240	240	215	225	240	240	255	q260a	248
20	q250a	240	240	240	235	260	240	230	p245c	280	245	250	270	280	280	260	q240	p230c	225	220	240	250	255	260	249
21	230	260	265	240	235	240	235	240	230	260	270	270	255	295	280	280	220	240	220	210	235	...a	260	260	...
22	295	265	225	225	220	260	250	235	240	260	270	290	...c	...c	...c	...c	225	240	240	250	245	245	240	235	...
23	250	260	255	245	240	245	225	230	245	270	260	265	270	290	280	280	245	250	235	p245a	240	240	265	270	254
24	270	310	260	245	p240a	250	260	265	295	q460k	q560k	q660k	...k	...k	600	450	265	270	280	p270a	280	250	305	250	...
25	...a	...a	...a	500	470	440	335	270	240	250	340	285	260	265	250	260	230	230	225	220	235	220	240	260	...
26	250	...a	...a	260	250	245	255	210	240	245	250	250	270	250	260	260	245	225	210	260	260	240	p260a	285	...
27	...a	...c	...c	...c	...c	...c	...c	...c	...c	270	265	260	270	265	270	260	220	210	215	210	230	225	240	265	...
28	290	290	275	245	250	245	215	240	235	240	225	260	265	230	270	280	240	220	200	220	220	230	245	260	246
29	270	295	270	225	240	260	245	245	240	245	...c	...c	275	260	245	...c	...c	240	230	210	250	230	240	240	...
30	260	290	270	260	265	245	235	230	245	250	270	265	270	280	285	265	245	230	210	205	240	240	245	255	252
31																									
MEAN*	260	262	252	246	250	266	252	239	240	261	268	275	266	270	282	268	237	235	224	226	239	239	250	253	252

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 381

APRIL 1946 APRIL 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	4.8	4.8	4.8	5.2	5.1	5.0	...	...	...	...
2	...	...	...	...c	4.6	5.1	5.0	5.1	5.2	5.0	...	...	...
3	...	...	...	4.8	4.6	5.4	5.0	5.1	5.2	...c	...	...	...
4	...	...	...	...	...a	5.2	5.3	5.6	5.1	4.8	...	...	...
5	...	...	...	...	4.8	5.0	5.0	5.0	...	...	...	...	...
6	...	...	...	...	...	5.2	4.8	...	4.8	...	...	...	...
7	...	...	...	...	5.2	5.3	5.4	...	5.1	...	...	...	...
8	...	...	...	...	...	4.9	...	5.5	...	...	...	...	...
9	...	...	...	...	...	...	...	5.3	...	5.0	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	4.8	5.0	5.4	...	...	...	...	...	...
12	...	...	...	...c	5.5	...	...	...	...	...	...	...	...
13	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
14	...	...	...	...c	...c	...c	...	...	4.9	...	...	...	...
15	...	...	...	...c	...c	...c	...c	...c	4.8	...	...	...	...
16	...	...	...	4.3	4.8	5.2	5.2	5.4	5.5	...	...	...	...
17	...	...	...	...c	...c	...c	...c	...c	...c	...	...	...	...
18	...	...	...	...	...	5.2	5.1	5.2	...	...	...	...	...
19	...	...	...	...	4.5	...	5.0	5.2	...	...	...	...	...
20	...	...	...	...	4.7	4.7	5.1	4.9	4.9	...	...	...	...
21	...	...	...	...	...	5.0	4.8	5.3	...	...	...	...	...
22	...	...	...	...	5.2	...c	...c	...c	...c	...c	...	...	...
23	...	...	...	...	...c	...	...c	...c	...	...	...	...	...
24	...	...	...	3.9	4.0	4.0	4.0	...c	4.2	4.1	...	...	...
25	...	...	...	...	4.5	4.7	4.7	4.6	...	...	...	...	...
26	...	...	...	...	4.2	4.7	...	4.6	...	5.0	...	...	...
27	...	...	...	4.8	...	...	...	...	...	...	...	...	...
28	...	...	...	...	...	4.8	...	...	...	...	...	...	...
29	...	...	...	...	...c	...c	...	...	...	...c	...	...	...
30	...	...	...	...	...	5.0	5.0	...	...	...	...	...	...
31													
* MEAN	...	...	...	4.5	4.7	5.0	5.0	5.1	5.0	4.8	...	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	235	220	210	205	210	240	...	...	...	...
2	...	...	...	...c	215	210	210	235	230	235	...	...	...
3	...	...	...	220	205	225	225	230	220	...c	...	...	...
4	...	...	...	...	...a	210	230	200	225	235	...	...	...
5	...	...	...	...	220	210	210	200	...	...	...	...	...
6	...	...	...	...	...	230	230	...	230	...	...	...	...
7	...	...	...	235	220	210	220	220	225	230	...	...	...
8	...	...	...	200	220	225	210	220	240	230	...	...	...
9	...	...	...	240	...	220	220	215	240	235	...	...	...
10	...	...	...	235	230	...	230	...	...a	...	...	...	...
11	...	...	...	235	230	210	p220a	230	230	240	...	...	...
12	...	...	...	...c	230	215	215	220	220	250	...	...	...
13	...	...	...	240	240	...c	...c	...c	230	240	...	...	...
14	...	...	...	...c	...c	220	200	195	240	220	...	...	...
15	...	...	...	235	...c	...c	...c	220	245	240	...	...	...
16	...	...	...	220	p225a	220	250	215	220	230	...	...	...
17	...	...	...	215	220	220	215	220	240	220	...	...	...
18	...	...	...	240	230	215	p215b	220	220	235	...	...	...
19	...	...	...	230	220	220	225	230	225	230	...	...	...
20	...	...	...	220	230	210	200	220	220	225	...	...	...
21	...	...	...	240	p240c	225	215	210	230	230	...	...	...
22	...	...	...	240	230	215	...c	...c	...c	...c	...	...	...
23	...	...	...	220	p225c	225	205	...c	230	...c	...	...	...
24	...	...	...	295	300	300	...k	...	260	250	...	...	...
25	...	...	...	...	210	200	225	210	220	220	...	...	...
26	...	...	...	225	220	200	220	200	230	245	...	...	...
27	...	...	...	240	235	220	215	230	230	240	...	...	...
28	...	...	...	220	...	220	230	...	...	240	...	...	...
29	...	...	...	230	...c	...c	220	220	...a	...c	...	...	...
30	...	...	...	240	220	235	215	215	230	250	...	...	...
31													
* MEAN	...	...	...	233	228	220	218	217	231	235	...	...	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f°F2 EQUAL TO OR LESS THAN f°F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 382

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

APRIL 1946 | APRIL 1946

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

MINIMUM RECORDED FREQUENCY

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	...
2	...	0.6	1.0	p1.0c	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.7	...
3	...	0.7	0.8	0.9	0.9	1.0	1.0	1.0	0.9	p0.9c	0.8	...c	...
4	...	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.7	...
5	...	0.6	1.0	0.8	0.9	0.7	0.8	0.9	0.9	0.8	0.8	0.7	...
6	...	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.7	...
7	...	0.7	0.7	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.8	...
8	...	0.6	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.7	...
9	...	0.7	0.9	0.9	1.0	0.9	0.9	1.0	0.9	0.9	0.8	0.8	...
10	...	0.6	0.6	0.9	0.9	0.9	1.7	0.9	0.9	0.8	0.8	0.8	...
11	...	0.9	0.8	0.9	1.0	0.9	1.0	0.9	0.9	0.8	0.8	0.8	...
12	...	...c	...c	...c	0.9	0.8	0.8	0.9	0.9	0.9	0.8	0.6	...
13	...	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.9	0.9	0.9	0.6	...
14	...	0.5	0.7	0.9	p0.7c	0.8	0.8	0.9	0.8	0.9	0.8	0.7	...
15	...	0.9	1.1	...c	...c	...c	...c	...c	...c	...c	0.9	0.9	...
16	...	0.5	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.8	0.7	0.7	...
17	...	0.9	0.8	0.9	...c	...c	1.0	0.9	0.9	0.8	...c	...c	...
18	...	...c	...c	0.7	0.7	0.9	...b	0.9	0.9	0.8	0.8	0.7	...
19	...	0.9	0.8	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.7	...
20	...	...c	...c	0.7	0.7	0.7	0.9	0.8	0.8	0.8	0.8	...c	...
21	...	0.6	0.7	0.7	1.2	1.2	1.2	1.2	1.1	1.0	0.7	...c	...
22	...	0.5	0.5	1.2	1.2	0.7	...c	...c	...c	...c	0.7	0.6	...
23	...	0.6	p0.8c	0.7	q0.8	q0.8	1.2	1.2	1.2	0.8	0.6	0.6	...
24	...	0.5	0.6	0.8	0.8	1.1	0.9	0.9	0.8	0.8	0.7	0.6	...
25	...	0.6	0.7	0.6	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.6	...
26	...	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	...
27	...	...c	...c	0.8	0.8	1.0	0.9	0.9	0.8	0.6	0.6	0.6	...
28	...	0.5	0.6	0.7	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.6	...
29	...	0.5	0.6	0.8	...c	...c	0.8	0.9	0.8	...c	...c	0.6	...
30	...	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.7	...
31													
MEAN*	...	0.7	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.8	0.8	0.7	...

CRITICAL FREQUENCY OF E REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	2.0	2.6	3.2	3.2	3.5	3.6	3.6	3.5	3.2	3.0	2.4	...
2	...	2.2	2.7	p3.2c	3.4	3.6	3.6	3.7	3.5	3.3	2.9	2.1	...
3	...	1.9	2.8	3.1	3.3	p3.5c	3.6	3.6	...a	...c	3.0	...c	...
4	...	2.1	2.4	3.1	3.1	p3.5a	2.7	3.7	3.6	3.4	3.0	2.3	...
5	...	2.1	2.8	3.2	q3.4	q3.6	3.6	3.7	3.5	3.3	3.0	2.4	...
6	...	2.2	2.9	3.2	3.4	3.6	3.4	3.7	3.6	3.4	3.0	2.1	...
7	...	...a	2.8	3.1	3.3	3.4	3.6	3.6	3.6	3.4	3.0	2.4	...
8	...	2.3	2.7	3.2	3.5	3.6	3.7	3.6	3.5	3.3	3.0	2.2	...
9	...	2.3	2.9	3.0	3.2	3.6	3.5	3.7	3.6	3.4	3.0	2.3	...
10	...	2.2	2.7	3.1	3.5	3.6	3.7	3.6	3.6	3.3	2.9	2.2	...
11	...	2.4	2.8	3.1	3.1	3.3	3.4	p3.5a	3.5	3.0	2.7	2.3	...
12	...	...c	...c	...c	3.5	3.5	3.6	3.6	3.4	3.2	2.8	2.3	...
13	...	2.3	2.8	q3.2	3.3	3.4	3.5	3.5	3.5	3.3	2.9	2.3	...
14	...	2.2	2.8	3.6	...c	...c	3.5	3.5	3.4	3.2	2.8	2.2	...
15	...	2.0	2.6	3.1	3.3	...c	...c	3.4	3.3	3.2	2.9	...c	...
16	...	2.1	2.6	3.0	3.2	3.3	3.3	3.4	3.3	3.1	2.5	2.0	...
17	...	1.9	2.6	3.0	p3.3c	3.4	3.4	3.3	3.0	2.5	...c	...c	...
18	...	...c	...c	3.0	3.3	3.4	...b	q3.4	3.3	3.1	2.8	2.2	...
19	...	2.1	2.1	3.1	3.3	3.4	3.5	3.6	3.5	3.1	2.8	2.1	...
20	...	...c	...c	3.1	3.3	3.5	3.6	3.5	3.4	3.1	2.7	...c	...
21	...	2.0	2.4	3.0	q3.3	q3.3	q3.3	3.3	3.2	3.1	2.8	2.1	...
22	...	2.0	2.7	3.0	3.4	...c	...c	...c	...c	...c	2.7	2.4	...
23	...	1.9	2.4	2.9	3.0	3.0	...a	...c	3.2	2.9	2.6	q2.2a	...
24	...	2.0	2.6	3.0	3.3	...c	...c	...c	...c	3.0	2.7	2.2	...
25	...	1.8	2.5	2.9	3.1	3.3	3.3	3.3	3.2	3.0	3.2	2.0	...
26	...	1.8	2.6	3.0	3.2	...c	...c	3.5	3.3	3.1	2.7	2.1	...
27	...	...c	...c	3.1	3.4	3.3	3.4	3.5	3.3	3.0	2.8	2.0	...
28	...	1.9	2.7	3.1	3.4	3.7	3.7	3.5	3.7	3.2	2.7	1.9	...
29	...	1.5	2.3	3.1	...c	...c	3.5	3.5	3.3	...c	...c	1.8	...
30	...	1.8	2.7	3.3	3.3	3.5	3.5	3.5	3.3	3.0	2.6	2.3	...
31													
MEAN*	...	2.0	2.6	3.1	3.3	3.4	3.5	3.5	3.4	3.2	2.8	2.2	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 383

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1946 — CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND — MAY 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	3.5	3.6	3.8	3.7	3.7	3.7	3.5	6.0	8.2	9.2	10.2	10.0	9.8	10.8	10.8	10.6	10.2	10.2	9.0	6.5	4.6	3.8	3.4	3.3	6.8
2	3.2	3.3	3.4	3.7	3.7	3.5	3.0	6.0	8.0	9.8	10.9	10.8	11.9	11.9	11.8	12.0	11.1	9.8	8.7	6.5	5.4	5.1	4.3	3.8	7.2
3	3.9	3.9	3.8	4.2	4.1	4.0	3.8	6.5	9.0	9.4	10.7	10.9	10.7	10.5	10.9	11.1	10.3	9.4	8.8	6.4	5.5	q4.7j	q4.0j	4.0	7.1
4	4.2	4.2	4.4	4.6	4.7	4.6	3.7	6.2	8.6	9.4	10.6	p11.1c	10.8	10.8	11.5	12.0	11.4	q10.5j	9.0	7.7	6.5	6.1	5.5	5.4	7.6
5	5.3	4.7	4.8	5.2	5.3	5.0	4.1	6.7	9.0	10.8	11.2	11.8	11.3	11.5	11.8	12.4	11.7	11.1	9.3	7.6	6.0	4.0	3.7	3.7	7.8
6	3.9	3.9	4.2	4.2	4.1	3.2	2.9	6.5	9.0	9.6	11.1	11.1	10.8	11.0	p10.8c	11.1	10.8	11.3	11.3	10.4	8.0	6.5	5.4	5.3	7.8
7	5.4	5.0	4.5	4.6	4.1	3.8	3.4	6.3	8.8	10.9	11.1	12.6	11.2	11.3	11.3	11.8	12.4	q13.0	q13.4	9.5	5.4	5.4	5.3	5.3	8.2
8	5.6	5.9	4.9	3.8	3.1	2.8	3.0	6.2	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	11.4	q11.9	q11.6	11.5	10.2	9.0	6.6	6.5	4.1	4.3	...a	...
10	4.5	4.5	4.2	3.7	3.2	3.4	3.5	6.4	8.8	10.8	11.2	q12.0	11.6	11.0	10.4	11.2	10.2	9.9	7.8	6.0	4.0	3.6	3.0	...f	...
11	q3.5f	q3.7f	3.8	3.3	q3.4f	...f	q3.3f	6.2	7.4	8.5	10.6	11.3	10.0	10.1	11.5	11.3	10.6	9.9	8.9	5.3	6.3	3.6	3.3	3.6	...
12	3.7	...f	3.6	3.6	3.4	q2.6f	2.1	5.0	8.4	8.3	10.8	10.4	10.5	10.5	9.5	10.2	9.5	9.4	7.1	5.6	4.7	3.8	3.8	3.7	...
13	3.7	q3.4	3.0	3.0	2.8	3.0	3.3	5.5	7.6	8.6	10.0	10.3	10.0	11.0	11.0	10.2	9.5	8.8	6.9	5.0	3.6	3.7	4.0	3.5	6.3
14	3.2	3.1	3.2	3.5	3.8	3.0	2.8	5.6	8.0	8.9	10.2	10.3	10.2	10.3	9.8	10.4	10.4	9.3	6.9	4.1	4.0	3.5	3.2	3.4	6.3
15	3.4	3.5	3.7	3.9	3.9	3.3	3.1	5.2	7.2	8.1	8.4	9.6	q10.0h	9.7	10.4	8.8	8.3	7.6	5.7	4.0	3.7	3.8	3.6	3.7	5.9
16	3.8	3.5	3.7	4.0	3.7	3.5	3.3	5.6	7.2	...c	...c	q9.5h	9.0	8.5	8.6	9.5	9.3	7.3	6.6	4.3	3.9	4.1	3.6	3.8	...
17	4.0	4.3	4.2	3.6	3.8	3.7	3.8	6.0	7.4	8.2	8.5	9.3	9.7	9.6	11.0	10.8	9.2	6.7	5.4	4.3	4.3	4.2	4.2	4.0	6.3
18	3.8	4.0	3.8	3.6	3.3	3.1	2.3	4.7	7.7	8.4	10.0	9.9	9.7	8.7	10.2	10.5	9.7	7.7	5.7	4.2	3.8	4.0	3.8	3.8	6.1
19	3.6	3.5	3.3	3.0	3.1	3.1	2.5	5.2	7.2	8.9	8.2	10.0	8.4	8.7	9.3	9.0	8.3	8.1	5.7	4.7	3.4	2.8	2.8	3.0	5.7
20	3.0	3.3	3.3	3.5	3.8	3.2	2.7	5.4	7.0	8.0	8.2	8.4	9.2	8.3	8.8	8.9	7.7	7.6	6.8	4.4	3.8	3.2	3.0	3.2	5.6
21	3.4	3.4	3.7	3.9	4.0	3.6	3.0	4.6	8.7	8.4	9.3	9.8	10.0	9.9	10.2	9.4	10.3	9.8	8.0	6.4	3.9	4.1	4.3	4.0	6.5
22	4.2	4.4	4.7	4.8	3.1	3.0	2.8	4.9	6.8	9.2	10.0	10.8	11.3	10.8	11.1	10.3	9.2	8.7	8.3	7.0	4.3	3.6	3.1	2.9	6.6
23	3.2	3.3	3.0	3.0	2.6	2.5	2.4	4.4	7.0	9.1	10.7	9.7	10.4	10.7	10.5	12.2	11.3	10.8	6.3	4.4	4.4	4.0	4.3	4.2	6.4
24	4.4	4.5	3.6	3.5	3.5	3.4	3.4	5.7	7.5	10.2	11.1	10.8	11.5	10.8	10.8	10.7	11.0	9.6	5.8	4.4	3.1	3.2	3.3	3.2	6.6
25	3.4	3.3	3.2	3.1	3.0	2.9	2.7	5.0	7.8	9.5	10.4	11.9	10.8	11.1	10.0	10.1	10.4	9.3	6.7	4.4	3.8	3.0	2.7	2.8	6.3
26	3.1	2.1	...f	1.9	2.3	2.5	2.6	5.3	7.1	8.7	10.2	9.5	10.3	9.5	...c	9.4	9.5	8.1	6.6	5.1	3.8	3.3	2.9	2.8	...
27	2.5	2.8	3.0	3.0	3.0	3.0	2.6	4.8	8.1	9.0	10.6	9.6	...c	8.4	q9.5	9.5	9.6	8.4	6.8	4.8	3.5	3.6	3.0	3.0	...
28	q3.4j	...f	3.3	3.1	3.3	2.9	2.8	5.1	7.6	7.8	9.5	9.4	p9.1j	9.2	10.2	9.9	10.2	9.1	7.0	4.0	3.2	3.5	3.5	3.5	...
29	3.5	3.5	4.0	3.6	4.1	3.0	2.7	5.2	7.8	9.4	10.6	11.0	10.7	11.0	10.5	10.6	10.5	9.4	7.1	4.7	4.0	3.5	3.7	3.9	6.6
30	4.1	4.1	4.5	4.2	4.0	2.8	2.7	5.2	8.5	8.0	8.9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
31	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
*MEAN	3.8	3.8	3.8	3.7	3.6	3.3	3.0	5.6	7.9	9.1	10.1	10.4	10.3	10.2	10.5	10.6	10.1	9.3	7.7	5.7	4.6	4.0	3.8	3.7	6.6

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 384

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1946 — MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS — MAY 1946

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	280	265	270	250	265	240	240	240	240	250	275	250	250	275	280	265	235	240	200	220	230	p240a	260	275	251
2	280	275	275	270	240	230	260	230	240	260	265	250	290	290	270	250	q240	220	215	215	240	240	240	260	252
3	265	250	270	265	225	240	230	230	230	245	270	250	265	p265c	260	250	220	215	220	210	225	240	240	245	243
4	260	270	270	240	255	230	235	230	235	260	260	p265c	265	265	280	260	p240c	230	220	230	230	280	240	260	250
5	245	260	240	260	240	235	225	230	240	240	260	280	260	270	p285b	260	250	230	220	230	220	220	260	290	248
6	280	270	260	260	225	200	265	250	240	230	250	265	280	250	p290c	260	250	250	230	220	225	240	260	280	251
7	250	240	260	250	240	230	220	240	250	245	265	260	270	250	295	270	250	250	215	200	p235a	280	310	...a	...
8	...a	250	230	220	230	240	275	250	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	260	265	265	230	230	220	...c	220	230	...a	...a	...
10	280	...a	...a	...a	295	280	270	240	250	260	260	280	265	260	240	270	240	230	...c	230	240	240	270	...a	...
11	...a	...a	...a	...a	220	...a	260	230	230	245	270	265	260	260	290	265	230	240	210	230	220	q220	280	...a	...
12	310	...a	270	240	215	...a	270	240	240	260	...c	270	280	...c	265	280	240	235	200	240	220	245	270	260	...
13	255	q250	q260	q260	q260	q280	270	240	240	240	265	270	260	270	260	255	220	230	220	230	235	270	245	230	251
14	250	255	265	265	245	210	270	240	240	250	275	265	260	250	260	270	240	220	210	230	250	230	245	260	248
15	230	250	265	260	250	220	q250	220	240	255	265	265	270	290	250	255	230	230	230	...a	260	240	250	260	...
16	230	240	265	240	240	230	245	240	240	...c	...c	275	260	270	270	265	230	220	220	...a	250	250	245	260	...
17	270	245	...a	240	290	290	270	240	235	235	270	230	270	285	280	260	240	200	220	240	250	280	260	260	...
18	280	270	290	300	270	270	290	230	...c	230	290	260	270	290	270	250	240	220	215	250	260	270	265	...a	...
19	...a	...a	...a	...a	250	255	...a	245	240	250	250	260	250	270	265	260	250	225	220	295	210	...a	260	270	...
20	280	290	280	300	270	230	260	230	240	250	260	280	265	280	290	250	230	...a	220	210	285	250	260	270	...
21	280	270	290	270	250	220	280	230	250	270	280	255	285	290	270	q250a	260	240	210	220	210	280	250	280	258
22	290	280	290	260	...f	...a	...a	250	245	260	275	280	280	265	260	260	250	240	260	230	...a	280	270	275	...
23	280	250	280	280	320	250	q270	q240	240	270	280	260	290	270	230	270	250	230	200	260	250	300	260	280	263
24	250	240	250	...a	...a	270	...a	240	240	260	260	260	290	270	260	240	240	220	220	230	250	275	290	280	...
25	...a	270	240	230	250	240	290	250	240	260	265	290	260	280	260	260	240	230	210	230	240	250	265	250	...
26	260	260	200	290	280	240	225	240	240	260	260	240	260	245	...c	265	225	235	230	240	230	240	260	250	...
27	280	280	280	290	280	265	225	250	240	250	250	250	260	255	250	260	240	220	220	240	260	240	250	250	254
28	255	260	270	260	250	200	250	240	240	220	260	260	250	270	270	250	240	230	220	220	245	260	250	260	247
29	270	275	245	240	220	240	275	240	230	240	250	260	260	270	250	250	245	230	200	230	240	265	250	280	248
30	250	250	230	230	235	200	250	230	240	230	270	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
31	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
MEAN*	266	261	262	259	252	240	257	238	240	249	265	263	268	269	267	259	239	229	218	231	238	254	259	265	252

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = $f^{0}F2$ EQUAL TO OR LESS THAN $f^{0}F1$ h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 385

MAY 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1946

FI REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

CRITICAL FREQUENCY OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...	...	...	...	5.0	...	5.0	...	...	...
2	...	...	...	...	5.0	4.8	5.2	5.3	...	...	...	...	...
3	...	...	...	...	5.0	...c	...c	...c	...c	...c	...	...	...
4	...	...	...	5.0	5.0	...c	5.2	5.2	...	...	...	...	...
5	...	...	...	...	5.0	...	4.7	5.0	...b	...	...	...	...
6	...	...	...	...	5.3	5.0	...	...	...c	4.5	...	...	...
7	...	...	...	...	5.0	5.0	5.1	4.5	5.0	...	...	...	...
8	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
9	...	...	...	...c	...c	...c	...c	4.3	4.8	4.3	...	...	...
10	...	...	...	4.9	5.0	5.2	4.5	5.2	4.5	4.5	...	...	...
11	...	...	...	4.1	4.2	4.9	4.9	...	4.9	4.4	...	...	...
12	...	...	...	4.6	4.8	4.7	5.0	...c	4.8	4.5	...	...	...
13	...	...	...	...	4.7	4.5	4.8	4.5	4.8	...	...	...	...
14	...	...	...	5.0	4.8	4.4	4.5	4.4	...	4.0	...	...	...
15	...	...	...	4.2	4.3	4.5	4.4	5.0	4.5	4.0	...	...	...
16	...	...	...	...c	...c	5.0	4.5	4.2	...c	4.2	...	...	...
17	...	...	...	4.0	5.0	4.7	4.5	5.0	4.5	4.8	...	...	...
18	...	...	...	...	5.2	4.6	4.8	4.8	4.5	4.0	...	...	...
19	...	...	...	4.2	4.3	4.8	4.5	4.4	4.4	4.0	...	...	...
20	...	...	...	4.0	4.5	5.0	4.8	4.7	4.8	4.3	...	...	...
21	...	...	...	4.8	5.0	4.5	5.0	4.6	p4.3a	4.0	...	...	...
22	...	...	...	...	4.7	4.8	5.0	4.5	4.2	4.5	...	...	...
23	...	...	...	...	5.0	4.8	4.7	4.5	...	4.8	...	...	...
24	...	...	...	4.8	4.6	5.1	5.1	...	4.9	...	...	...	...
25	...	...	...	4.6	5.1	4.9	4.8	5.2	4.5	...	...	...	...
26	...	...	...	...	4.5	4.6	4.4	4.0	5.1	5.1	...	...	...
27	...	...	...	...	4.8	4.6	4.5	4.5	...	...	...	...	...
28	...	...	...	...	5.2	4.8	4.6	4.6	4.1	4.3	...	...	...
29	...	...	...	...	4.7	...	4.8	...	...	5.0	...	...	...
30	...	...	...	...	...	...c	...c	...c	...c	...c	...	...	...
31	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
* MEAN	...	...	...	4.5	4.8	4.8	4.8	4.7	4.6	4.4	...	...	...

MINIMUM VIRTUAL HEIGHT OF FI REGION

DAY	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	240	240	215	210	225	250	230	...	...	...
2	...	...	...	230	240	220	220	235	225	...	...	...	...
3	...	...	...	...c	240	...c	...c	...c	...c	...c	...	...	...
4	...	...	...	...c	225	...c	205	200	220	240	...	...	...
5	...	...	...	...	240	230	235	...a	...b	250	...	...	...
6	...	...	...	...	230	235	210	...	...c	235	...	...	...
7	...	...	...	...	245	240	250	220	260	240	...	...	...
8	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
9	...	...	...	...c	...c	...c	...c	210	240	240	...	...	...
10	...	...	...	240	230	230	220	230	200	245	...	...	...
11	...	...	...	230	210	245	195	210	215	230	...	...	...
12	...	...	...	230	...c	220	220	...c	...b	245	...	...	...
13	...	...	...	...	240	230	220	220	220	230	...	...	...
14	...	...	...	245	240	225	220	230	210	230	...	...	...
15	...	...	...	230	230	230	210	240	230	220	...	...	...
16	...	...	...	...c	...c	230	250	215	p215c	230	...	...	...
17	...	...	...	235	210	220	180	230	210	230	...	...	...
18	...	...	...	...	240	230	230	225	230	220	...	...	...
19	...	...	...	240	210	q200h	230	210	215	220	...	...	...
20	...	...	...	230	215	185	230	240	220	...a	...	...	...
21	...	...	...	q220h	250	230	240	240	...a	q225a	...	...	...
22	...	...	...	250	240	210	250	230	190	240	...	...	...
23	...	...	...	...	250	240	220	230	...	245	...	...	...
24	...	...	...	250	240	230	230	220	...a	...	...	...	...
25	...	...	...	240	240	230	230	225	240	230	...	...	...
26	...	...	...	235	240	220	q200h	230	230	240	...	...	...
27	...	...	...	230	230	220	230	220	220	245	...	...	...
28	...	...	...	...	230	240	230	230	235	230	...	...	...
29	...	...	...	...	240	220	230	200	225	240	...	...	...
30	...	...	...	...	230	...c	...c	...c	...c	...c	...	...	...
31	...	...	...	...c	...c	...c	...c	...c	...c	...c	...	...	...
* MEAN	...	...	...	236	234	225	223	224	224	235	...	...	...

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 386

MAY 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

MAY 1946

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	0.6	0.6	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.6	...
2	...	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.2	0.8	p0.8c	0.6	...
3	...	0.6	0.6	0.7	0.8	...c	...c	...c	...c	...c	0.8	0.6	...
4	...	0.6	0.7	0.8	1.2	p0.9c	1.0	1.0	1.0	0.8	q0.6	0.6	...
5	...	0.6	0.7	0.7	0.7	0.7	1.1	1.1	...b	1.0	0.7	0.6	...
6	...	0.6	0.7	0.8	1.0	1.0	1.1	0.9	p1.0c	1.0	0.8	0.7	...
7	...	0.6	0.7	0.6	1.0	1.1	1.0	0.9	0.7	0.6	0.6	0.5	...
8	...	0.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...	...c	...c	...c	...c	...c	...c	1.2	1.1	1.0	0.7	0.6	...
10	...	0.7	0.8	0.8	1.0	1.1	0.9	1.0	1.0	0.8	0.7	0.6	...
11	...	0.6	0.6	0.8	0.7	0.8	0.7	0.8	...c	0.5	0.5	0.5	...
12	...	0.6	0.7	0.7	0.7	0.8	0.8	0.8	...b	1.0	0.6	0.6	...
13	...	0.6	0.6	0.8	0.9	0.8	0.7	1.0	0.7	0.6	0.7	0.6	...
14	...	0.5	0.7	0.7	0.8	0.8	0.9	0.7	0.7	0.6	0.6	0.6	...
15	...	0.6	1.0	0.6	1.0	0.7	0.8	0.7	0.7	0.7	0.5	0.6	...
16	...	0.6	0.6	...c	...c	0.8	0.8	0.7	0.8	0.7	0.6	0.6	...
17	...	0.6	0.6	0.5	0.7	0.7	0.8	0.8	0.6	0.7	0.7	0.7	...
18	...	0.6	0.6	0.7	0.9	0.8	0.9	0.9	0.6	0.7	0.6	0.5	...
19	...	0.6	0.9	0.6	0.8	0.8	0.6	1.0	0.9	0.7	0.6	0.7	...
20	...	0.6	0.6	0.6	0.6	0.9	0.8	0.8	0.8	0.6	0.6	0.6	...
21	...	0.5	0.7	0.7	0.7	1.1	0.8	1.0	0.7	0.7	0.6	0.5	...
22	...	0.6	0.6	0.6	0.7	0.7	0.8	0.6	0.7	0.6	0.7	0.6	...
23	...	0.6	0.7	1.0	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	...
24	...	0.5	0.7	0.6	0.7	0.8	0.9	1.0	0.7	0.6	0.6	0.5	...
25	...	0.5	0.8	0.7	0.8	0.6	0.6	0.6	0.7	0.6	0.6	0.6	...
26	...	0.6	0.7	0.8	0.7	0.8	0.9	0.7	0.6	0.7	0.6	0.6	...
27	...	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.9	0.7	0.7	0.5	...
28	...	0.7	0.9	1.0	0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.7	...
29	...	0.6	0.9	0.6	0.9	0.7	0.7	0.8	1.0	0.7	0.6	0.6	...
30	...	0.5	1.0	0.9	0.9	...c	...c	...c	...c	...c	...c	...c	...
31	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
MEAN*	...	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.6	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	1.7	2.5	3.1	3.3	3.4	3.4	3.3	3.5	3.2	2.7	2.0	...
2	...	1.9	2.8	3.2	3.3	3.4	...c	3.5	3.4	3.2	p2.8c	2.1	...
3	...	2.1	2.5	3.2	3.2	...c	...c	...c	...c	...c	2.8	2.2	...
4	...	2.1	2.8	3.1	3.4	p3.4c	3.6	3.6	3.4	3.3	q2.4	2.0	...
5	...	2.0	2.8	3.0	3.5	3.4	3.5	3.3	p3.3c	3.4	2.9	2.0	...
6	...	2.1	2.7	3.1	3.4	3.5	3.5	3.6	...	3.2	2.8	1.8	...
7	...	2.0	2.5	3.1	3.4	3.6	3.5	3.6	3.4	3.1	2.7	1.8	...
8	...	2.0	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...	...c	...c	...c	...c	...c	...c	3.5	3.1	3.0	2.7	2.0	...
10	...	1.9	2.7	3.2	3.3	3.4	3.5	3.4	3.0	3.0	2.6	1.9	...
11	...	1.9	2.5	3.1	3.3	3.3	3.5	3.3	3.2	3.0	2.5	1.9	...
12	...	2.0	2.6	2.9	3.1	3.3	3.5	3.4	...b	3.1	2.5	1.9	...
13	...	1.8	2.4	2.9	3.1	3.3	3.4	3.3	3.2	2.9	2.5	1.7	...
14	...	1.8	2.5	3.0	3.1	3.3	3.2	3.1	3.1	2.9	2.5	1.8	...
15	...	1.7	2.4	2.8	3.0	3.1	3.0	3.6	3.1	2.9	2.4	1.9	...
16	...	1.7	2.4	...c	...c	3.3	3.3	3.3	3.0	3.0	2.8	1.8	...
17	...	1.8	2.5	3.0	3.2	3.0	3.4	3.1	3.2	3.0	2.4	1.9	...
18	...	1.8	2.3	3.0	3.0	3.2	3.4	3.4	3.2	3.0	2.5	1.8	...
19	...	1.9	2.4	2.8	3.1	3.2	3.2	3.3	3.2	3.0	2.5	1.9	...
20	...	2.0	2.4	2.9	3.2	3.3	3.4	3.3	3.2	...a	2.7	...a	...
21	...	1.7	2.4	2.9	3.2	3.3	3.4	3.3	3.0	3.0	2.5	1.7	...
22	...	1.8	2.4	2.9	3.1	3.3	3.3	3.4	3.3	3.1	2.5	2.0	...
23	...	1.9	2.5	3.0	3.1	3.1	3.0	3.0	3.1	3.1	2.4	1.8	...
24	...	1.8	2.4	3.0	3.2	3.3	3.2	3.3	...a	3.0	2.6	2.0	...
25	...	1.8	2.4	2.7	3.0	3.2	3.4	3.2	3.3	3.1	2.6	1.9	...
26	...	1.8	2.4	2.9	3.0	3.3	3.4	3.3	3.2	2.9	2.5	1.9	...
27	...	1.8	2.5	3.0	3.2	3.3	3.5	3.6	3.3	3.2	2.6	2.0	...
28	...	2.0	2.4	2.9	3.1	3.5	3.6	3.5	3.3	3.0	2.4	1.9	...
29	...	1.9	2.4	3.0	3.4	3.3	3.4	3.5	3.4	3.1	2.6	1.8	...
30	...	1.8	2.5	2.7	3.1	...c	...c	...c	...c	...c	...c	...c	...
31	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
MEAN*	...	1.9	2.5	3.0	3.2	3.3	3.4	3.4	3.2	3.1	2.6	1.9	...

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY K = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 387

JUNE 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1946

CRITICAL FREQUENCY OF F2 REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	4.7	3.7	4.1	3.7	3.2	3.7	...
2	3.8	4.0	4.0	4.3	4.4	4.0	3.1	4.7	6.4	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	4.0	3.4	3.0	3.1	3.4	...
3	3.5	3.6	3.9	4.1	q4.4j	3.5	2.7	q4.6j	6.4	q7.4j	8.7	8.5	...c	...c	...c	9.3	8.0	...c	5.4	3.4	3.4	2.8	3.0	3.5	...
4	3.6	...c	3.7	4.0	4.0	3.8	3.3	4.8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
10	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	6.3	4.6	2.8	2.4	2.5	2.7	...
12	3.0	2.9	3.1	2.8	3.1	q2.7	q2.7	4.9	q5.8j	7.4	7.9	8.2	9.0	8.1	...c	...c	...c	...c	5.1	3.9	4.0	3.0	3.2	3.7	...
13	3.8	3.7	3.7	3.7	3.7	3.4	2.7	4.6	7.3	8.0	8.4	9.0	9.6	...c	...c	...c	10.5	...c	5.2	3.8	3.7	q3.4j	4.0	3.6	...
14	3.0	2.8	2.8	3.1	3.5	3.5	3.1	4.7	7.0	8.8	7.9	p 9.3c	9.2	9.4	9.5	p 8.6c	7.8	7.6	7.4	5.2	3.0	2.8	3.1	3.8	5.7
15	3.7	3.6	3.7f	4.2	4.4	3.0f	2.6f	4.6	6.9	8.0	8.0	8.3	8.0	8.1	8.8	8.3	9.0	8.7	6.4	4.6	3.0	...c	...c	...c	...
16	3.2	3.2	3.0	3.2f	3.6	3.1	2.9	5.0	7.6	8.8	9.3	8.8	8.0	9.3	9.3	10.2	10.1	8.4	5.5	5.1	3.0	2.7	3.0	3.5	5.8
17	2.8	3.0	2.6	3.3	3.1	2.6	2.9	4.4	7.9	5.1	5.8	9.4	11.3	10.9	10.3	10.5	9.2	8.7	6.6	5.0	4.8	3.8	3.6	3.8	5.9
18	3.8	3.6	4.0	4.0	4.5	3.7	2.9	4.9	7.6	9.6	8.5	8.6	9.8	8.8	9.6	10.0	9.3	8.0	6.0	5.4	3.7	2.9	3.4	3.9	6.1
19	3.9	3.6	3.8	3.7f	3.7	q3.7c	3.6	4.7	6.7	...c	...c	...c	10.5	11.0	11.3	p11.2c	10.5	9.5	8.4	7.1	4.6	4.4	4.0	3.5	...
20	3.8	3.7	3.9	4.0	4.3	4.0	2.7	5.3	7.5	8.5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	7.9h	9.9	8.6h	8.6	9.6	9.6	10.1	10.5	9.3	6.8	4.7	3.7	...f	2.7	3.4	...
22	4.5	4.2	4.2	4.1	3.9	3.4	3.0	4.7	7.2	8.5	8.5	10.0	9.1	10.1	9.8	10.1	9.8	8.4	7.7	6.0	5.0	3.8	3.3	3.3	6.4
23	3.2	3.0	3.4	3.6	q2.7f	2.7	2.7	4.6	7.5	8.7	8.8	9.7	9.2h	9.3	10.5	9.1	10.4	8.7	7.6	5.9	3.0	3.0	3.1	2.8	6.0
24	2.9	3.3	3.3	3.7f	3.7	3.6	3.1	4.3	7.4	8.3	8.7	8.7	10.5	8.5j	10.0	8.7	8.6	8.5	7.2	5.8	5.6	4.2	3.4	3.4	6.1
25	3.5	3.6	3.6	3.6	3.6	3.5	3.5	4.7	7.0h	8.5	10.7	10.0	9.7j	10.2	9.4	9.5	9.8	8.4	7.8	5.1	3.9	3.3	3.0	3.4	6.2
26	3.0	3.0	3.0	3.0	3.2	3.4	3.2	4.6	6.9	8.5	9.8	9.7	10.2	10.4	9.3	9.5	8.5	8.4	6.7	5.8	5.0	4.1	3.7	3.8	6.1
27	3.7	3.4	3.4	3.5	3.4	3.3	3.2	5.3	7.8	q9.6c	9.1	8.9	9.0	8.0	q 9.6c	7.3	8.4	8.5	7.1	8.3	5.0	2.9	3.2	3.2	6.0
28	3.2	3.3	3.6	3.1	2.7	2.7	3.0	5.0	...c	8.4	8.5	8.9	10.0	9.2	9.3j	10.4	10.4	9.0	7.3	6.8	5.2	3.4	3.4	3.6	...
29	4.0	3.8	4.0	3.9	3.9	q2.9f	...f	5.4	7.7	9.3	10.2	10.1	9.3	10.1	10.2	11.3	9.7	9.0	7.1	6.7	4.5	3.6	3.7	3.8	...
30	q3.5c	3.2	4.0	4.2	3.7	2.0	2.0	4.2	7.2	8.4	9.7	9.5	8.9	9.6	8.9	9.5	8.2	6.8	5.8	4.5	2.6	2.1	1.9	1.9	5.5
31																									
MEAN*	3.5	3.4	3.6	3.7	3.7	3.3	2.9	4.8	7.1	8.3	8.8	9.1	9.4	9.4	9.7	9.6	9.4	8.5	6.6	5.2	4.0	3.3	3.2	3.4	6.0

* = ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

TABLE 388

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1946 | JUNE 1946

MINIMUM VIRTUAL HEIGHT OF F2 REGION EXPRESSED IN KILOMETERS

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	200	240	220	240	240	270	...
2	265	250	240	255	245	215	210	235	240	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	235	210	215	250	260	...
3	280	275	255	240	225	200	200	230	235	235	230	q220	...c	...c	...c	240	...c	...c	205	250	245	200	240	250	...
4	230	235	255	250	220	235	215	230	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
5	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
7	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
8	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...a	...c	...c	...c	...c	...c	...c	...
9	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
10	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
11	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	220	210	...a	290	300	265	...
12	280	215	210	240	265	q225	q215	q255	200	260	250	240	300	270	...c	...c	...c	...c	q200	250	235	275	305	255	...
13	245	p250c	255	290	230	230	230	230	240	250	250	270	260	...c	...c	...c	250	p225	200	275	250	270	250	230	...
14	220	245	265	280	260	235	250	q210	220	...a	225	...c	270	300	275	...c	220	...a	...a	...a	260	260	285	275	...
15	245	225	250	240	240	...f	245	q235	235	250	240	250	240	240	255	260	245	235	q210	...a	...a	...c	...c	...c	...
16	275	250	220	250	240	220	215	245	235	245	245	270	275	285	270	230	245	230	200	...a	...a	q235	250	300	...
17	250	265	275	275	p265a	270	250	250	245	245	250	275	285	235	245	240	260	220	p215a	230	250	225	245	240	250
18	235	250	250	265	250	215	210	245	240	250	255	270	260	270	275	260	240	220	235	220	235	p240a	265	310	249
19	265	245	250	270	270	q235c	205	225	205	...c	...c	...c	275	270	275	...c	240	240	210	215	250	235	220	...a	...
20	...c	...c	300	295	250	q220c	p240a	250	240	235	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...
21	...c	...c	...c	...c	...c	...c	...c	...c	...c	240	265	265	250	265	265	270	245	220	205	210	215	220	270f	300f	...
22	280	270	270	250	215	210	q220f	q220c	240	255	q240c	280	240	265	265	240	235	q230a	q235a	q240a	230	q215c	235	275	244
23	...f	250	q270f	250	...f	240	235	230	240	265	275	255	255	255	260	230	q290	220	215	205	195	240	235	230	...
24	295	280	245	260	...a	...a	220	220	225	250	255	250	280	235	270	q240a	240	q240a	225	250	...a	...a	...a	...a	...
25	270	285	245	255	235	250	250	230	230	245	245	245	245	300	250	270	245	220	200	230	230	225	290	270	248
26	225	275	280	285	280	240	225	220	240	250	270	250	310	260	295	270	235	230	200	245	235	250	260	260	254
27	245	280	295	265	270	260	240	250	245	q245c	245	250	270	q250c	q275c	q250c	250	235	240	230	220	p280a	300	300	258
28	340	295	225	230	250	275	245	235	255	290	245	250	285	240	260	275	265	220	225	240	215	235	265	255	255
29	275	265	260	270	235	...f	...f	230	230	260	255	270	300	310	270	275	250	240	225	230	...a	...a	300	250	...
30	...c	310	300	265	...c	...f	...f	260	275	270	270	260	265	295	280	250	250	225	215	...a	...a	265	275	295	...
31																									
MEAN*	262	261	258	261	247	234	227	235	236	252	251	257	270	267	268	253	247	228	214	234	231	243	264	268	249

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE

d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^oF2 EQUAL TO OR LESS THAN f^oF1 h = STRATIFICATION OBSERVED

j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   k = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 389

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1946

F1 REGION CRITICAL FREQUENCY EXPRESSED IN MEGACYCLES PER SECOND AND MINIMUM VIRTUAL HEIGHT EXPRESSED IN KILOMETERS
(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	CRITICAL FREQUENCY OF F1 REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
2	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
3	...	...	...	3.0	...c	3.5	...c	...c	...c	4.3	...c	...	...
4	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
5	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
6	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
7	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
8	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
9	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
10	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
11	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
12	...	...	...	4.2	3.9	4.5	4.6	4.1	...c	...c	...c	...	...
13	...	...	...	q3.7c	...c	...a	q4.0	...c	...c	...c	3.6	...	...
14	...	...	...	...a	...a	...c	4.7	...c	...a	...c	...a	...	...
15	...	...	...	...m	4.0	4.3	...m	4.2	4.2	3.9	3.8	...	...
16	...	...	...	4.1	...m	4.5	...m	4.4	4.5	...a	...a	...	...
17	...	...	...	...c	...c	...m	4.2	...a	...a	...a	4.4	...	...
18	...	...	...	5.0	4.4	...m	4.9	5.2	...m	4.5	...	...	...
19	...	...	...	...c	...c	...c	4.7	5.1	4.4	...c	...	...	...
20	...	...	...	3.9	...c	...e	...c	...e	...c	...c	...c	...	...
21	...	...	...	3.5	4.5	...m	4.5	5.1	...m	...m	3.3	...	...
22	...	...	...	3.9	...c	5.1	...c	4.5	4.3	...a	...a	...	...
23	...	...	...	3.9	...m	...m	4.6	...m	4.0	3.9	...m	...	...
24	...	...	...	4.7	4.5	...m	...c	3.8	...a	...a	3.3	...	...
25	...	...	...	4.4	4.3	4.6	4.6	5.1	...m	3.6	...m	...	...
26	...	...	...	...m	...m	4.4	5.4	4.7	4.6	3.7	3.3	...	...
27	...	...	...	4.2	3.9	...m	...m	...c	q4.5c	...c	...a	...	...
28	...	...	...	4.9	...m	4.9	...m	...a	...m	4.0	3.4	...	...
29	...	...	...	4.4	5.0	...m	5.4	...m	4.3	...m	...m	...	...
30	...	...	...	...m	4.6	4.5	4.7	4.8	4.4	3.6	...m	...	...
31													
* MEAN	...	...	...	4.1	4.3	4.5	4.7	4.6	4.4	3.9	3.6	...	...

DAY	MINIMUM VIRTUAL HEIGHT OF F1 REGION												
	8	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
2	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
3	...	...	...	170	...c	...c	...c	...c	...c	170	190	...	...
4	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
5	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
6	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
7	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
8	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
9	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
10	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
11	...	...	...	...c	...c	...c	...c	...c	...c	...c	...c	...	...
12	...	...	...	245	215	...c	190	195	...c	...c	...c	...	...
13	...	...	...	q205c	...c	...a	q225	...c	...c	...c	210	...	...
14	...	...	...	...a	...a	...c	210	...c	...a	...c	...a	...	...
15	...	...	...	240	235	220	190	215	240	225	245	...	...
16	...	...	...	240	230	230	210	260	220	...a	...a	...	...
17	...	...	...	...c	...c	225	220	...a	...a	...a	240	...	...
18	...	...	...	245	240	230	230	225	240	235	...	...	...
19	...	...	...	...c	...c	...c	225	200	240	...c	...	...	...
20	...	...	...	230	...c	...c	...c	...c	...c	...c	...c	...	...
21	...	...	...	225	250	205	210	220	250	250	240	...	...
22	...	...	...	230	p235c	245	230	240	240	...a	...a	...	...
23	...	...	...	245	200	230	210	220	235	225	q240	...	...
24	...	...	...	245	225	235	200	235	...a	...a	235	...	...
25	...	...	...	240	230	235	230	210	245	230	225	...	...
26	...	...	...	240	225	220	235	240	230	215	225	...	...
27	...	...	...	q235c	205	240	230	q210c	q205c	...a	...a	...	...
28	...	...	...	200	240	245	...a	...a	235	250	245	...	...
29	...	...	...	245	250	230	225	230	235	230	235	...	...
30	...	...	...	240	235	215	230	255	255	230	...a	...	...
31													
* MEAN	...	...	...	231	245	229	218	225	236	226	230	...	...

* = ALL TABULATED VALUES   a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E   b = LOSS OF RECORD DUE TO ABSORPTION   c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER   e = BELOW LOWER LIMIT OF RECORDER   f = SPREAD ECHOES PRESENT   g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY   K = IONOSPHERIC STORM IN PROGRESS   p = INTERPOLATED VALUE   q = DOUBTFUL VALUE

TABLE 390

JUNE 1946

IONOSPHERIC RESULTS AT WATHEROO MAGNETIC OBSERVATORY

JUNE 1946

MINIMUM RECORDED FREQUENCY AND CRITICAL FREQUENCY OF THE E REGION EXPRESSED IN MEGACYCLES PER SECOND

(TABULAR VALUES OBTAINED IN FIRST FIFTEEN MINUTES FOLLOWING THE HOURS INDICATED—120° EAST MERIDIAN MEAN TIME)

DAY	MINIMUM RECORDED FREQUENCY												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
2	...	0.7	1.0	...c	...c	...c	...c	...c	...c	...c	...c	...	...
3	...	0.7	0.8	0.8	0.8	0.8	...c	...c	...c	0.9	0.9	...	...
4	...	0.6	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
5	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
6	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
7	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
8	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
9	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
10	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
11	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
12	...	...e	...c	0.5e	0.7	1.0	0.8	1.0	...c	...c	...c	...	...
13	...	0.6	q1.2c	q1.2c	q1.2c	q1.2c	q1.3c	...c	...c	...c	0.8	...	...
14	...	0.7	1.0	0.8	0.8	...c	q1.0	...c	0.8	...c	...e	...	...
15	...	...e	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	...	...
16	...	...e	0.6	0.8	0.8	0.8	0.8	0.8	1.0	0.8	0.7	...	...
17	...	...e	0.8	0.8	0.8	0.8	1.1	1.2	0.8	0.8	0.8	...	...
18	...	...e	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.7	...	...
19	...	...e	0.6	...c	...c	...c	0.8	...e	...c	...c	...e	...	...
20	...	...e	0.8	0.8	...c	...c	...c	...c	...c	...c	...c	...	...
21	...	...c	...c	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...	...
22	...	...c	0.8	0.7	0.8	...c	...c	...c	...c	...c	...c	...	...
23	...	0.8	0.8	0.8	0.8	q1.0c	1.0	0.8	0.8	0.8	0.8	...	...
24	...	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	...	...
25	...	0.8	0.8	1.0	0.8	0.8	0.8	0.6	0.8	0.7	0.6	...	...
26	...	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.6	...	...
27	...	0.8	0.8	0.7	0.8	0.7	0.8	...c	q0.8c	0.7	0.6	...	...
28	...	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.7	...	...
29	...	0.6	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.6	...	...
30	...	...c	0.7	0.8	0.7	0.8	q1.2c	q1.2c	1.0	0.8	0.8	...	...
31													
MEAN*	...	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	...	...

DAY	CRITICAL FREQUENCY OF E REGION												
	6	7	8	9	10	11	12	13	14	15	16	17	18
1	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
2	...	1.8	2.3	...c	...c	...c	...c	...c	...c	...c	...c	...	...
3	...	1.8	2.2	2.7	3.0	3.2	...c	...c	...c	3.3	3.2	...	...
4	...	1.0	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
5	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
6	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
7	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
8	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
9	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
10	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
11	...	...c	...c	...c	...c	...c	...c	...c	...c	...c	...c	...	...
12	...	q1.8	2.2	2.7	3.0	3.1	3.2	3.2	...c	...c	...c	...	...
13	...	...a	2.0	q2.7	3.1	3.1	3.2	...c	...c	...c	2.7	...	...
14	...	1.9	...a	...a	...a	...c	3.6	3.3	q3.4	...c	...	...	...
15	...	...a	2.3	3.0	3.1	3.1	3.1	q3.2	3.1	2.9	2.6	...	...
16	...	1.8	2.4	2.9	3.2	3.4	2.9	3.0	2.7	3.1	...a	...	...
17	...	...	2.4	2.9	2.8	2.9	2.8	...a	...a	...a	2.8	...	...
18	...	1.7	2.2	2.6	2.8	3.0	3.2	3.3	3.1	2.8	2.2	...	...
19	...	1.7	2.3	...c	...c	...c	3.4	1.7	...c	...c	...	...	...
20	...	1.7	2.3	...c	...c	...c	...c	...c	...c	...c	...c	...	...
21	...	...c	...c	2.8	3.0	3.3	2.8	3.2	3.2	2.9	2.4	...	...
22	...	...c	2.3	2.7	2.8	3.0	p3.0	3.0	3.3	3.0	3.0	...	...
23	...	...a	2.3	2.7	3.0	3.3	3.4	3.4	3.1	3.0	2.7	...	...
24	...	1.7	2.3	2.9	3.3	q3.0a	...c	...a	q3.1a	...a	...a	...	...
25	...	1.5	q2.3	2.3	3.2	3.2	3.5	3.4	3.3	3.0	2.4	...	...
26	...	...a	2.2	2.8	3.1	3.3	3.3	3.3	3.3	2.8	2.4	...	...
27	...	1.6	2.2	2.8	3.1	3.3	3.4	p3.2c	q3.3c	...a	...a	...	...
28	...	1.4	2.4	2.3	2.9	3.3	3.5	p3.4c	3.2	2.8	2.3	...	...
29	...	1.8	2.2	2.8	3.0	3.1	3.4	3.3	3.2	2.9	3.3	...	...
30	...	1.6	2.1	2.6	3.0	3.1	...a	...a	3.3	2.4	2.3	...	...
31													
MEAN*	...	1.7	2.3	2.7	3.0	3.2	3.2	3.1	3.2	2.9	2.6	...	...

*=ALL TABULATED VALUES a = NOT MEASURABLE OWING TO SPORADIC OR ABNORMAL E b = LOSS OF RECORD DUE TO ABSORPTION c = RECORD LOST BY EQUIPMENT FAILURE OR INTERFERENCE
d = BEYOND UPPER LIMIT OF RECORDER e = BELOW LOWER LIMIT OF RECORDER f = SPREAD ECHOES PRESENT g = f^0F2 EQUAL TO OR LESS THAN f^0F1 h = STRATIFICATION OBSERVED
j = ORDINARY-WAVE CRITICAL FREQUENCY DEDUCED FROM MEASURED EXTRAORDINARY-WAVE CRITICAL FREQUENCY k = IONOSPHERIC STORM IN PROGRESS p = INTERPOLATED VALUE q = DOUBTFUL VALUE

BIBLIOGRAPHY

REFERENCES TO PUBLICATIONS ON IONOSPHERIC RESEARCH BY DEPARTMENT OF TERRESTRIAL MAGNETISM AUTHORS

Basic Techniques and Instrumentation

Breit, G., and M. A. Tuve. 1925-1929. Nature, vol. 116, p. 357, 1925; Phys. Rev., vol. 28, pp. 554-575, 1926; Proc. Inst. Radio Eng., 1927-1929.

Berkner, L. V. 1934. Multifrequency measurement of virtual heights of the ionized regions of the ionosphere. C. R. Assemblée de Lisbonne, September, 1933. Union Géod. Géophys. Internat. Ass. Mag. Electr. Terr., Bull. No. 9, pp. 201-206.

——— 1940. Observatory technique of ionospheric measurements. Trans. Washington Meeting, September, 1939. Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., Bull. No. 11, pp. 417-437.

———, H. W. Wells, and S. L. Seaton. 1936. Automatic multifrequency technique for ionospheric measurements. Rep. and Comm., Edinburgh Assembly, Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., September, 1936, 11 pp.

General

Berkner, L. V. 1934. The relation of the Pacific eclipse of June 8, 1937, to investigations of changes of ionization of the ionosphere. Terr. Mag., vol. 39, pp. 317-319.

——— 1934. Memorandum on the use of fixed-frequency virtual-height records in correlations with other geophysical phenomena. C. R. Assemblée de Lisbonne, septembre 1933; Union Géod. Géophys. Internat., Ass. Mag. Electr. Terr., Bull. No. 9, pp. 206-209.

——— 1935. The ionization of the Earth's upper atmosphere. Nation. Res. Council, Trans. Amer. Geophys. Union, 16th annual meeting, I, pp. 20-26.

——— 1935. Ionosphere observations at the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. Abstracted in J. Wash. Acad. Sci., vol. 25, pp. 459-461.

——— 1936. Variations of upper atmospheric ionization. Conseil Internat. Unions Scientifiques, Quatrième Rapport, Comm. Relations Solaires et Terrestres, pp. 101-106.

——— 1937. The electrical state of the Earth's outer atmosphere. Sci. Mon., vol. 45, pp. 126-141; Carnegie Inst., Sup. Pub., No. 32, 16 pp.

——— 1940. Problems of upper atmospheric physics. Abstracted in Trans. Washington Meeting, September, 1939; Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., Bull. No. 11, pp. 500-502.

——— 1942. Radio-transmission conditions in equatorial regions from observations in the Americas. Proc. Eighth Amer. Sci. Cong., Washington, D. C., 1940, vol. 7, pp. 279-289.

———, and H. W. Wells. 1934. Report of ionosphere investigations at the Huancayo Magnetic Observatory (Peru) during 1933. Proc. Inst. Radio Eng., vol. 22, pp. 1102-1123.

———, ———, and S. L. Seaton. 1936. New factors in investigation of the ionosphere. Nation. Res. Council, Amer. Geophys. Union, 17th annual meeting, I, pp. 178-182.

Booker, H. G. 1938. Propagation of wave-packets incident obliquely upon a stratified doubly refracting ionosphere. Phil. Trans. R. Soc., vol. 237, pp. 411-451.

——— 1938. Propagation of wave-packets in a stratified doubly-refracting ionosphere. Science, vol. 87, p. 426. [Abstract of paper presented before the National Academy of Sciences, Washington, D. C., April 25, 1938.]

Booker, H. G. 1942. Height of maximum electron-density in the ionosphere. Terr. Mag., vol. 47, p. 173.

———, and L. V. Berkner. 1938. A fundamental problem concerning the Lorentz correction to the theory of refraction. Science, vol. 87, pp. 257-258.

———, ——— 1938. Constitution of the ionosphere and the Lorentz polarization correction. Nature, vol. 141, pp. 562-563.

———, ——— 1938. An ionospheric investigation concerning the Lorentz polarization-correction. Terr. Mag., vol. 43, pp. 427-450. [Abstracted in Phys. Rev., vol. 53, p. 924.]

———, and S. L. Seaton. 1940. Relation between actual and virtual ionospheric height. Trans. Washington Meeting, September, 1939; Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., Bull. No. 11, pp. 503-515.

———, ——— 1940. Relation between actual and virtual ionospheric height. Phys. Rev., vol. 57, pp. 87-94.

Chapman, S. 1941. The Sun and the ionosphere. J. Inst. Elec. Eng., vol. 88, I, pp. 400-413.

Coile, R. C. 1941. Ionospheric characteristics at Huancayo, Peru, for the year 1940. Terr. Mag., vol. 46, pp. 435-442.

Fleming, J. A. 1934. Report on ionosphere investigations conducted at College-Fairbanks, Alaska, during the winter of 1933-1934. Terr. Mag., vol. 39, pp. 305-313.

——— 1940. Suggested lines for further investigations of upper-air physics. Trans. Washington Meeting, September, 1939; Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., Bull. No. 11, pp. 527-531.

——— 1943. The Sun and the Earth's magnetic field. Smithsonian Inst., Report 1942, pp. 173-208 with 19 pls.

Ledig, P. G., R. C. Coile, and M. W. Jones. 1941. The ionosphere at Huancayo, Peru, April to June, 1941; July to September, 1941. Terr. Mag., vol. 46, pp. 351-354; 443-446.

McNish, A. G. 1937. Terrestrial magnetism and the ionosphere. J. Applied Phys., vol. 8, pp. 718-731.

Parkinson, W. C. 1941. The ionosphere at Watheroo, Western Australia, July to September, 1940; October, 1940, to March, 1941; April to June, 1941; July to September, 1941. Terr. Mag., vol. 46, pp. 79-82; 223-229; 347-350; 447-450.

———, L. S. Prior. 1939. The ionosphere at Watheroo, Western Australia, May to December, 1938; January, February, and March, 1939; April, May, and June, 1939. Terr. Mag., vol. 44, pp. 199-204; 341-343; 401-403.

———, ——— 1940. The ionosphere at Watheroo, Western Australia, July to September, 1939; October to December, 1939; January to June, 1940. Terr. Mag., vol. 45, pp. 45-47; 169-172; 471-476.

Wells, H. W. 1934. Report on measurements obtained at the Huancayo Magnetic Observatory (Peru) following the program of the Second International Polar Year during May to August, 1933. Terr. Mag., vol. 39, pp. 315-316.

——— 1939. The ionosphere at Huancayo, Peru, April, May, and June, 1939. Terr. Mag., vol. 44, pp. 395-399.

——— 1940. The ionosphere at Huancayo, Peru, July to September, 1939. Terr. Mag., vol. 45, pp. 49-52.

——— 1941. Ionospheric investigations at Huancayo Magnetic Observatory (Peru) with application to wave-transmission conditions. Proc. Inst. Radio Eng., vol. 29, pp. 667.

Wells, H. W. 1942. Effects of solar activity on the ionosphere and radio communication. Abstracted in Proc. Inst. Radio Eng., vol. 30, p. 254.

——— 1943. Effects of solar activity on the ionosphere and radio communications. Proc. Inst. Radio Eng., vol. 31, pp. 147-157.

———, and R. C Coile. 1940. Ionospheric characteristics at Huancayo, Peru, for the year 1939. Terr. Mag., vol. 45, pp. 159-165.

———, ——— 1940. The ionosphere at Huancayo, Peru, October to December, 1939; January to June, 1940. Terr. Mag., vol. 45, pp. 155-158; 477-483.

———, ——— 1941. The ionosphere at Huancayo, Peru, July to September, 1940. Terr. Mag., vol. 46, pp. 83-86.

———, P. G. Ledig, R. C. Coile, and M. W. Jones. 1941. The ionosphere at Huancayo, Peru, October, 1940, to March, 1941. Terr. Mag., vol. 46, pp. 231-237.

———, H. E. Stanton. 1938. The ionosphere at Huancayo, Peru, November and December, 1937; January to March, 1938; April, May, and June, 1938. Terr. Mag., vol. 43, pp. 169-171; 257-260; 467-470.

———, ——— 1939. The ionosphere at Huancayo, Peru, July, August, and September, 1938; October, November, and December, 1938; January, February, and March, 1939. Terr. Mag., vol. 44, pp. 85-88; 195-198; 321-325.

———, ——— 1939. Ionospheric characteristics at Huancayo, Peru, December, 1937, through December, 1938. Terr. Mag., vol. 44, pp. 326-334.

E-Region

Berkner, L. V., and H. W. Wells. 1936. Studies of the E-region of the ionosphere at low latitudes. Rep. and Comm., Edinburgh Assembly, Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., September, 1936, 3 pp.

Wells, H. W. 1934. Critical-frequency observations of the E-layer at the Huancayo Magnetic Observatory. Terr. Mag., vol. 39, pp. 209-214.

F-Region

Berkner, L. V., and H. W. Wells. 1934. F-region ionosphere investigations at low altitudes. Terr. Mag., vol. 39, pp. 215-230.

———, ——— 1936. New factors in investigation of the high region of the upper atmosphere. Rep. and Comm., Edinburgh Assembly, Internat. Union Geod. Geophys., Ass. Terr. Mag. Electr., September, 1936, 4 pp.

———, ——— 1938. Nonseasonal change in F2-region ion-density. Terr. Mag., vol. 43, pp. 15-36.

———, ———, S. L. Seaton. 1936. Characteristics of the upper region of the ionosphere. Terr. Mag., vol. 41, pp. 173-184.

Booker, H. G., and H. W. Wells. 1938. Scattering of radio waves by the F-region of the ionosphere. Terr. Mag., vol. 43, pp. 249-256.

Seaton, S. L., and L. V. Berkner. 1939. Nonseasonal behavior of the F-region. Terr. Mag., vol. 44, pp. 313-319.

Radio Fade-out

Berkner, L. V. 1939. Concerning the nature of radio fade-out. Phys. Rev., vol. 55, pp. 536-544.

——— 1939. The nature of radio fade-out. J. Applied Phys., vol. 10, pp. 532-533.

——— 1939. The nature of radio fade-outs and their relation to bright chromospheric eruptions. Cinquième Rapport, Comm. Relations Solaires et Terrestres, pp. 76-84.

Berkner, L. V., and H. W. Wells. 1937. Study of radio fade-outs. Terr. Mag., vol. 42, pp. 183-194. [Abstracted in Trans. Amer. Geophys. Union, 18th annual meeting, p. 163.]

———, ——— 1937. Further studies of radio fade-outs. Terr. Mag., vol. 42, pp. 301-309.

———, ——— 1938. Investigation of radio fade-outs at the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. Proc. Gen. Assembly, Internat. Sci. Radio Union, 1938, vol. 5, I, Sci. Papers, pp. 168-180.

Fleming, J. A. 1936. Notes on radio fade-out of August 25, 1936. Terr. Mag., vol. 41, pp. 404-406.

McNish, A. G. 1937. Magnetic effects associated with bright solar eruptions and radio fade-outs. Nature, vol. 139, p. 244.

——— 1937. Terrestrial effects accompanying several bright chromospheric eruptions. Abstracted in Science, vol. 85, pp. 441-442.

———, 1937. Terrestrial-magnetic and ionospheric effects associated with bright chromospheric eruptions. Terr. Mag., vol. 42, pp. 109-122.

——— 1937. Terrestrial effects associated with bright chromospheric eruptions. Trans. Amer. Geophys. Union, 18th annual meeting, I, pp. 164-169.

Seaton, S. L. 1938. Radio fade-outs at Huancayo and Watheroo Magnetic Observatories, February, 1937, through June, 1938. Terr. Mag., vol. 43, pp. 463-466.

Torreson, O. W., F. T. Davies, W. E. Scott, and H. E. Stanton. 1936. A solar eruption on November 6, 1936, and disturbances in Earth's magnetism, earth currents, and the ionospheric regions. Terr. Mag., vol. 41, pp. 409-410.

———, W. E. Scott, and H. E. Stanton. 1936. A solar eruption and simultaneous disturbances at Huancayo Magnetic Observatory. Science, vol. 83, pp. 463-464.

———, ———, ——— 1936. A conspicuous solar eruption on April 8, 1936, and simultaneous disturbances on magnetic, ionospheric, and earth-current records at Huancayo Magnetic Observatory. Terr. Mag., vol. 41, pp. 199-201.

Ionospheric Disturbances and Magnetic Effects

Berkner, L. V. 1938. Ionospheric disturbances coincident with magnetic storms. Abstracted in Trans. Amer. Geophys. Union, 19th annual meeting, I, pp. 199-200.

——— 1940. Fluctuations in the Earth's outer atmosphere during a great magnetic storm. Abstracted in J. Wash. Acad. Sci., vol. 30, pp. 400-401.

———, and A. G. McNish. 1938. The ephemeral variations of the Earth's magnetism. Carnegie Inst. Wash., Pub. No. 501, pp. 223-247, 6 figs.

———, S. L. Seaton. 1940. Ionospheric changes associated with the magnetic storm of March 24, 1940. Terr. Mag., vol. 45, pp. 393-418.

———, ——— 1940. Systematic ionospheric changes associated with geomagnetic activity. Terr. Mag., vol. 45, pp. 419-423.

———, H. W. Wells, and S. L. Seaton. 1939. Ionospheric effects associated with magnetic disturbance. Terr. Mag., vol. 44, pp. 283-311.

Seaton, S. L., and T. K. Hogan. 1938. Note on the ionospheric disturbance at Watheroo Magnetic Observatory, June 23, 1937. Terr. Mag., vol. 43, p. 90.

Wells, H. W. 1941. Ionospheric recordings during magnetic storm of March 1, 1941. Terr. Mag., vol. 46, pp. 245-246.

———, J. M. Watts, and D. E. George. 1946. Detection of rapidly moving ionospheric clouds. Phys. Rev., fol. 69, pp. 540-541.

Sporadic E

Berkner, L. V., and H. W. Wells. 1937. Abnormal ionization of the E-region of the ionosphere. Terr. Mag., vol. 42, pp. 73-76.

Wells, H. W. 1945. Sporadic E-region ionization at Watheroo Magnetic Observatory. Trans. Amer. Geophys. Union, vol. 26, pp. 381-387.

——— 1946. Sporadic E-region ionization at Watheroo Magnetic Observatory, 1938-1944. Proc. Inst. Radio Eng., vol. 34, pp. 950-955.

Eclipse Observations

Berkner, L. V., and S. L. Seaton. 1940. Ionospheric measurements during the solar eclipse of April 7, 1940. Trans. Amer. Geophys. Union, 21st annual meeting, II, pp. 311-314.

Ledig, P. G., M. W. Jones, A. A. Giesecke, and E. J. Chernosky. 1946. Effects on the ionosphere at Huancayo, Peru, of the solar eclipse, January 25, 1944. Terr. Mag., vol. 51, pp. 411-418.

Wells, H. W., and A. H. Shapley. 1946. Eclipse-effects in F2-layer of the ionosphere. Terr. Mag., vol. 51, pp. 401-409.

———, H. E. Stanton, and S. L. Seaton. 1938. Ionospheric observation: Eclipse of June 8, 1937. Terr. Mag., vol. 43, pp. 37-40.

Polarization and Magnetic Field Intensity Experiments

Wells, H. W. 1940. Multifrequency recordings of radio-wave polarization near the geomagnetic equator. Terr. Mag., vol. 45, pp. 353-358.

——— 1942. Earth's magnetic field and actual heights in ionosphere. Terr. Mag., vol. 47, pp 75-79. [Abstracted in Amer. Geophys. Union, Trans. of 1942, II, p. 289.]

———, L. V. Berkner. 1936 Polarization of radio waves from the ionosphere near the geomagnetic equator. Terr. Mag., vol. 41, pp. 75-82.

REFERENCES TO PUBLICATIONS ON IONOSPHERIC RESEARCH FROM OTHER SOURCES

In view of the fact that this volume is based on Department of Terrestrial Magnetism data and investigations, no attempt is made to include a complete bibliography of contributions to knowledge of the ionosphere made by other investigators and laboratories. Very complete and extensive references on this and related subjects are published for the period to 1940 in the volume Physics of the Earth--Terrestrial Magnetism and Electricity by J. A. Fleming (McGraw-Hill, 1939) and Geomagnetism, by Chapman and Bartels (Oxford University Press, 1940).

Some of the more outstanding articles published since 1940 are listed below. In addition to these, general reference is made to reports of the Central Radio Propagation Laboratory, National Bureau of Standards, and similar publications by other laboratories in Great Britain, Canada, Australia, New Zealand, and the Union of Soviet Socialist Republics.

Allen, C. W. 1946. Variation of the Sun's ultraviolet radiation as revealed by ionospheric and geomagnetic observations. Terr. Mag., vol. 51, pp. 1-18.

Bannon, J., and F. W. Wood. 1946. Cause and effect in region F2 of the ionosphere. Terr. Mag., vol. 51, pp. 89-102.

Bennington, T. W. 1943. Radio waves and the ionosphere With a foreword by Sir Edward Appleton. Wireless World, Iliffe and Sons, Ltd., London. (vi + 81).

Chapman, S. 1941. The Sun and the ionosphere. J. Inst. Elec. Eng., vol. 88, pp. 400-413.

Darrow, K. K. 1940. Analyses of the ionosphere. Bell System Tech. J., vol. 19, pp. 455-488.

——— 1940. The ionosphere. Elec. Eng., vol. 59, pp. 272-283.

Eckersley, T. L., and F. T. Farmer. 1945. Short period fluctuations in the characteristics of wireless echoes from the ionosphere. Proc. R. Soc., A, vol. 184, pp. 196-217.

Ferraro, V. C. A. 1945. Diffusion of ions in the ionosphere. Terr. Mag., vol. 50, pp. 215-222.

——— 1946. On diffusion in the ionosphere. Terr. Mag., vol. 51, pp. 427-431.

Harang, L. 1940. Annual variation of the critical frequencies of the ionized layers at Tromsö during 1939. Terr. Mag., vol. 45, pp. 167-168.

Jaeger, J. E. 1945. Note on diffusion in the ionosphere. Proc. Phys. Soc., vol. 57, pp. 519-523.

Rydbeck, O. 1940. The propagation of electromagnetic in an ionized medium and the calculation of the true heights of the ionized layers of the atmosphere. Phil. Mag., vol. 30, pp. 282-293.

Rydbeck, O. E. H. 1943. The reflection of electromagnetic waves from a parabolic ionized layer. Phil. Mag., vol. 34, pp. 342-348.

——— 1944. On the propagation of radio waves. Göteborg, Chalmers Tekn. Högsk. Handl., No. 34, 168 pp.

——— 1945. A simple Kerr. modulator for ionospheric recording. Göteborg. Chalmers Tekn. Högsk. Handl., No. 45, 13 pp.

U. S. Army Signal Corps. Report on Japanese research on radio wave propagation. Vols. I, II. May, 1946.

Woolley, R. v. d. R. 1946. The mechanism of ionospheric ionization. Proc. R. Soc., A, vol. 187, pp. 102-114.